HCD-RG222

SERVICE MANUAL

Ver 1.0 2004.04

AEP Model
UK Model
E Model
Australian Model

- HCD-RG222 is the tuner, deck, CD and amplifier section in MHC-RG222.

CD Section	Model Name Using Similar Mechanism	New
	CD Mechanism Type	CDM74-F1BD81
	Optical Pick-up Name	KSM-215DCP/C2NP
Tape deck Section	Model Name Using Similar Mechanism	New
	Tape Transport Mechanism Type	CWM43FF-05

SPECIFICATIONS

Amplifier section

The following measured at AC 120, 127, 220, 240 V 50/60 Hz

DIN power output (rated): 100 + 100 watts (6 ohms at 1 kHz, DIN)

Continuous RMS power output (reference): 120 + 120 watts (6 ohms at 1 kHz, 10% THD)

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780 nm) Emission duration: continuous
Frequency response	2 Hz – 20 kHz (±0.5 dB)
Wavelength	780 – 790 nm
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB

Tape deck section

Recording system	4-track 2-channel, stereo
Frequency response	50 – 13,000 Hz (±3 dB), using Sony TYPE I cassettes

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range

Russian model:	65.0 – 74.0 MHz (There is no stereo effect. 10-kHz step) 87.5 – 108.0 MHz (50-kHz step)
Other models:	87.5 – 108.0 MHz (50-kHz step)
Antenna	FM lead antenna
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range

European, Russian and Saudi Arabian models: 531 – 1,602 kHz (with the tuning interval set at 9 kHz)

Other models:	530 – 1,710 kHz (with the tuning interval set at 10 kHz) 531 – 1,602 kHz (with the tuning interval set at 9 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

General

Power requirements

European and Russian models: 230 V AC, 50/60 Hz

Australian model:	230 – 240 V AC, 50/60 Hz
Argentine models:	220 V AC, 50/60 Hz
Mexican models:	127 V AC, 60 Hz
Saudi Arabian model:	120 – 127/220 or 230 – 240 V AC, 50/60 Hz Adjustable with voltage selector
Other models:	120 V, 220 V or 230 – 240 V AC, 50/60 Hz Adjustable with voltage selector

Power consumption

European and Russian models: 110 watts 0.25 watts (at the Power Saving Mode)

Other models: 180 watts

Dimensions (w/h/d) incl. projecting parts and controls

Amplifier/Tuner/Tape/CD section: Approx. 280 × 327 × 425 mm

— Continued on next page —

MINI HI-FI COMPONENT SYSTEM

9-877-657-01
2004D1678-1
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Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY®

Mass

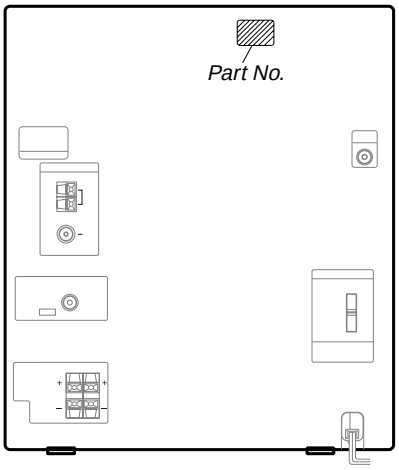
European and Russian models:

Approx. 8.5 kg

Other models: Approx. 10.0 kg

Design and specifications are subject to change without notice.

MODEL IDENTIFICATION
– Back Panel –



Model Name	Part No.
AEP and UK model	4-252-487-0
240V AC Area in E model	4-252-488-0
Singapore model	4-254-503-0
Australian model	4-254-504-0
Saudi Arabia model	4-254-512-0
Iran model	4-254-525-0
Russian model	4-254-798-0

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

The release method of a CD disc tray LOCK function

There is a disc lock function for the disc theft prevention for a demonstration at a shop front in this machine.
Procedue:

1. Press the I/⏻ button to turn the set on.
2. Press two buttons of ■ and ⏏ (EJECT) simultaneously for five seconds.
3. The message “LOCKED” is displayed and the tray is locked. (Even if exiting from this mode, the tray is still locked.)
4. Press two buttons of ■ and ⏏ (EJECT) simultaneously for five seconds again.
5. The message “UNLOCKED” is displayed and the tray is unlocked.
6. To exit from this mode, press the I/⏻ button to turn the set off.

Unleaded solder

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing
- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

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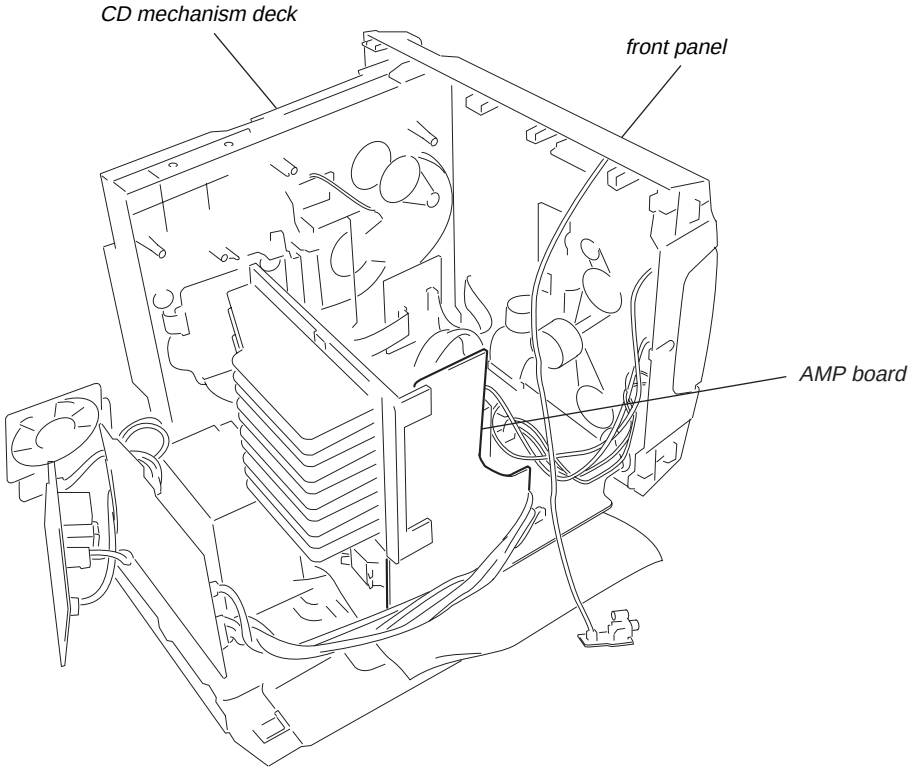
SECTION 1
SERVICING NOTE

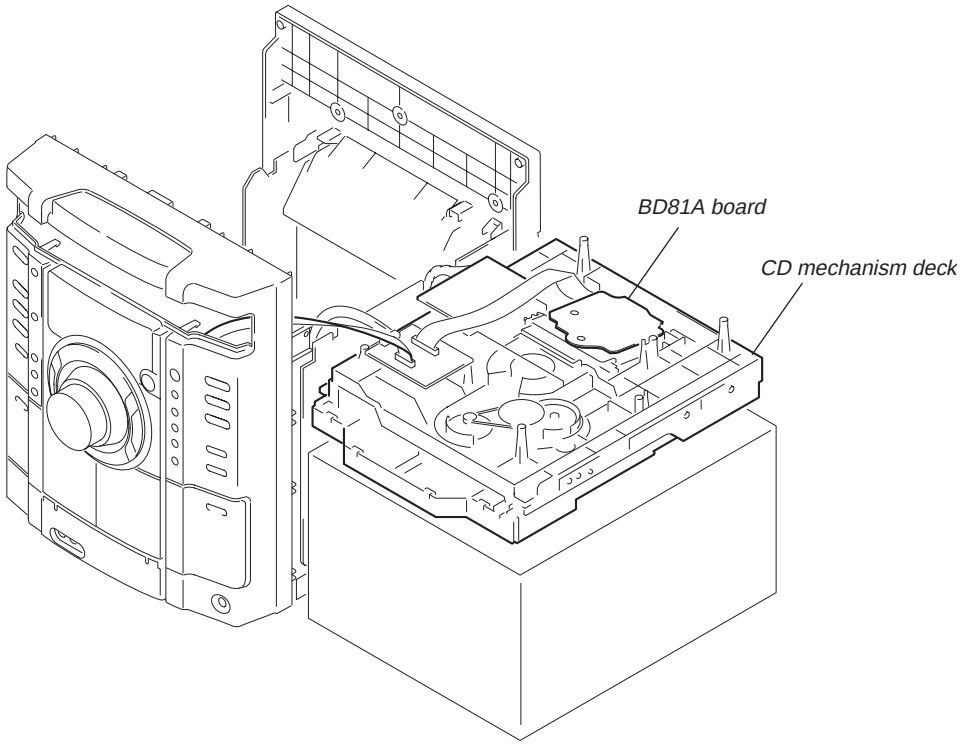
- **SERVICE POSITION -1 (AMP BOARD)**

To inspect the AMP board, turn both of the front panel and the CD mechanism deck so that the left side of the product faces down.



- **SERVICE POSITION -2 (BD81A BOARD)**

Remove the CD mechanism deck and place it on top of the pedestal as shown. Inspect the BD81A board in this set up.



SECTION 2
GENERAL

This section is extracted from instruction manual.

List of button locations and reference pages

How to use this page

Use this page to find the location of buttons and other parts of the system that are mentioned in the text.

Illustration number

TAPE A/B 33 (18, 19, 20, 24)

Name of button/part — Reference page

Main unit

ALPHABETICAL ORDER

A – O

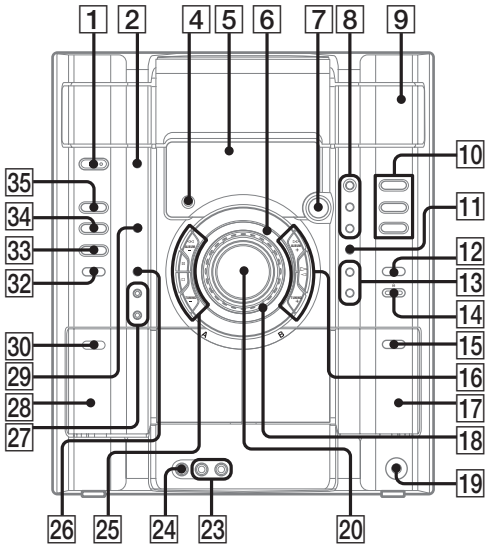
ALBUM+ 16 (12, 14, 19)
ALBUM– 25 (12, 14, 19)
CD 35 (9, 11, 14, 19, 20)
CD SYNC 27 (19)
Deck A 28 (18)
Deck B 17 (18, 19, 20, 24)
DISC 1 – 3 10 (12, 14, 35)
DISC SKIP/EX-CHANGE 12 (11, 12, 14, 19)
Disc tray 9 (11)
DISPLAY 2 (17, 27, 28)
Display window 5
EFFECT ON/OFF 8 (22)
ENTER 11 (14, 15, 22)
EQ BAND 7 (22)
GAME 32 (20, 23, 30)
GAME INPUT AUDIO L/R jacks 23 (20, 29)
GAME INPUT VIDEO jack 24 (29)
GAME MIXING 26 (23)
GROOVE 8 (21)
Operation Dial (– EQ +/⏮ ⏭) 6 (12, 14, 19, 22)

P – Z

P FILE 13 (22)
PHONES jack 19
PLAY MODE 29 (12, 14, 18, 19, 20, 35)
PRESET EQ 13 (22)
REC PAUSE/START 27 (19, 20, 23, 24)
Remote sensor 4
SURROUND 8 (23)
TAPE A/B 33 (18, 19, 20, 24)
TUNER/BAND 34 (15, 16, 20)
TUNING MODE 29 (15, 16, 35)
TUNING + 16 (15, 16)
TUNING – 25 (15, 16)
VOLUME control 20 (21)

BUTTON DESCRIPTIONS

I/⏻ (power) 1 (8, 16, 27, 30, 33, 35)
⏸ (pause) 25 (12, 19)
⏏ (eject) 14 (11)
PUSH ⏏ (deck B) (eject) 15 (18)
■ (stop) 25 (12, 19, 24, 35)
⏭ (fast forward) 16 (12, 19)
▷ (play) 16 (12, 18, 19)
⏮ (rewind) 25 (12, 19)
⏏ PUSH (deck A) (eject) 30 (18)



Remote control

ALPHABETICAL ORDER

A – E

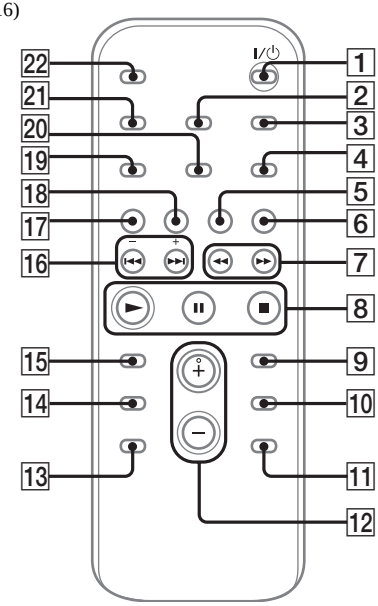
ALBUM+ 13 (12, 14)
ALBUM– 11 (12, 14)
CD 18 (11, 14)
CLEAR 15 (14)
CLOCK/TIMER SELECT 2 (26, 27)
CLOCK/TIMER SET 3 (10, 25, 26)
DISC SKIP 10 (12, 14)
DISPLAY 21 (17, 27, 28)
ENTER 9 (10, 14, 15, 25, 26)
EQ 14 (22)

F – Z

FM MODE 4 (17)
FUNCTION 6 (11, 14, 15, 16)
PLAY MODE 20 (12, 14, 18)
REPEAT 4 (13)
SLEEP 22 (25)
TAPE 17
TUNER BAND 5 (15, 16)
TUNER MEMORY 19 (15)
TUNING MODE 20 (15, 16)
VOLUME +/– 12 (21, 25)

BUTTON DESCRIPTIONS

I/⏻ (power) 1 (8, 26)
◀◀/▶▶ (rewind/fast forward) 7 (12, 19)
–/+ (tuning) 16 (15)
I◀◀ /▶▶I (go back/go forward) 16 (10, 12, 19)
► (play) 8 (12, 18)
II (pause) 8 (12, 19)
■ (stop) 8 (12, 19)



Setting the clock

Use buttons on the remote for the operation.

1 Press I/⏻ to turn on the system.

2 Press CLOCK/TIMER SET.

3 Press I◀◀ or ▶▶I repeatedly to set the hour.

4 Press ENTER.

5 Press I◀◀ or ▶▶I repeatedly to set the minute.

6 Press ENTER.

The clock starts working.

To adjust the clock

1 Press CLOCK/TIMER SET.

2 Press I◀◀ or ▶▶I repeatedly to select "CLOCK SET", then press ENTER.

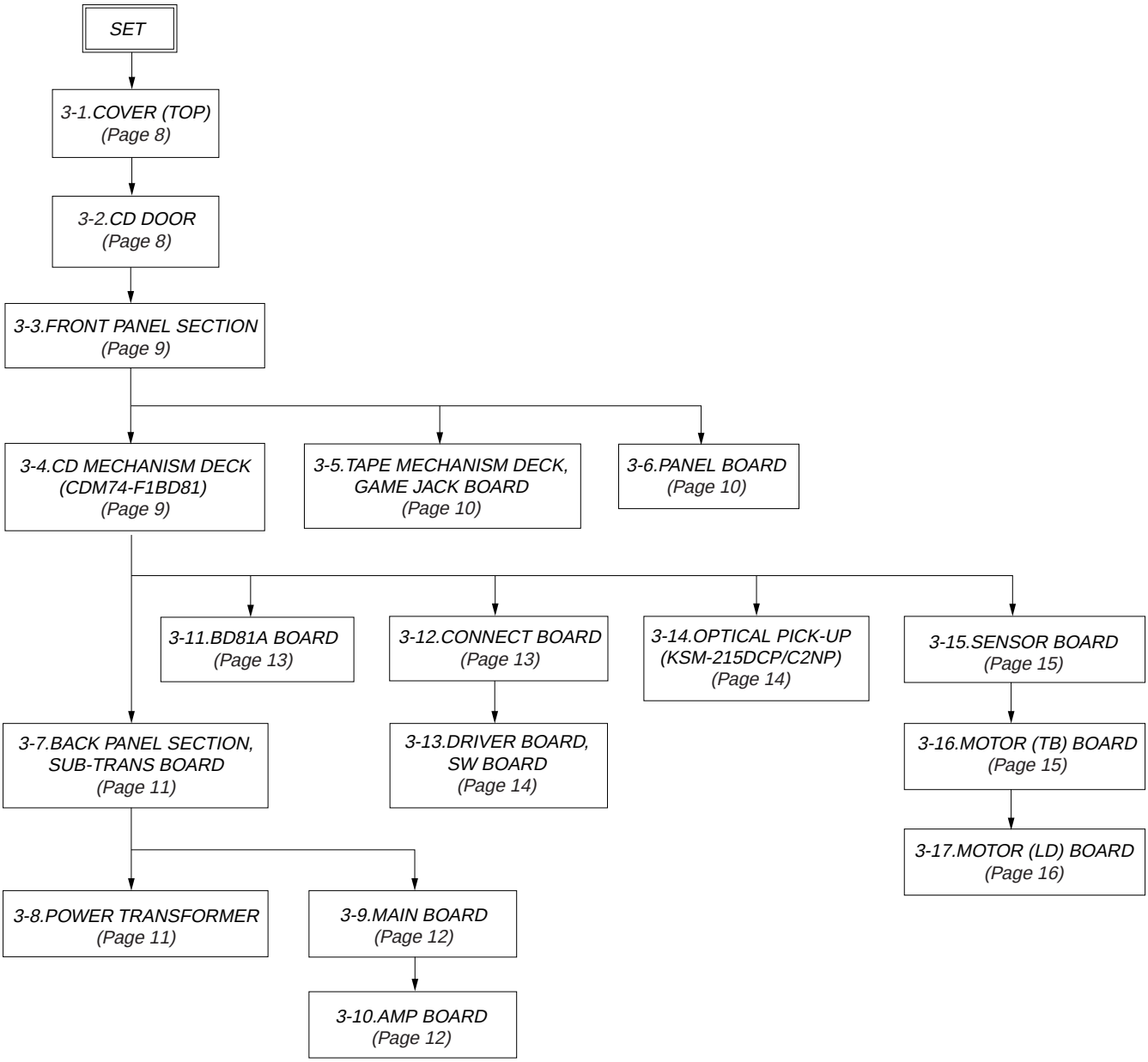
3 Do the same procedures as step 3 to 6 above.

Notes

The clock settings are canceled when you disconnect the power cord or if a power failure occurs.

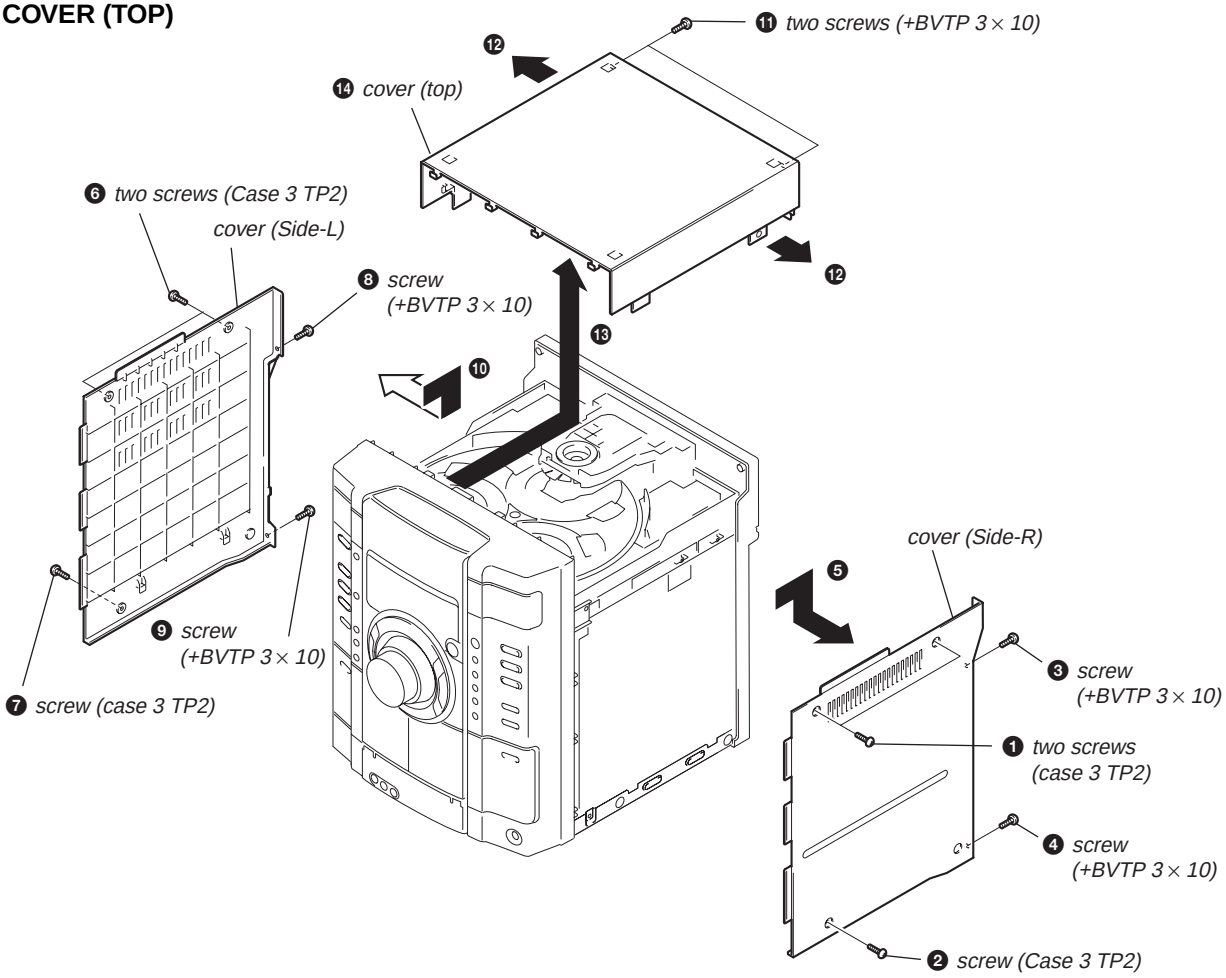
SECTION 3
DISASSEMBLY

Note: Disassemble the unit in the order as shown below.

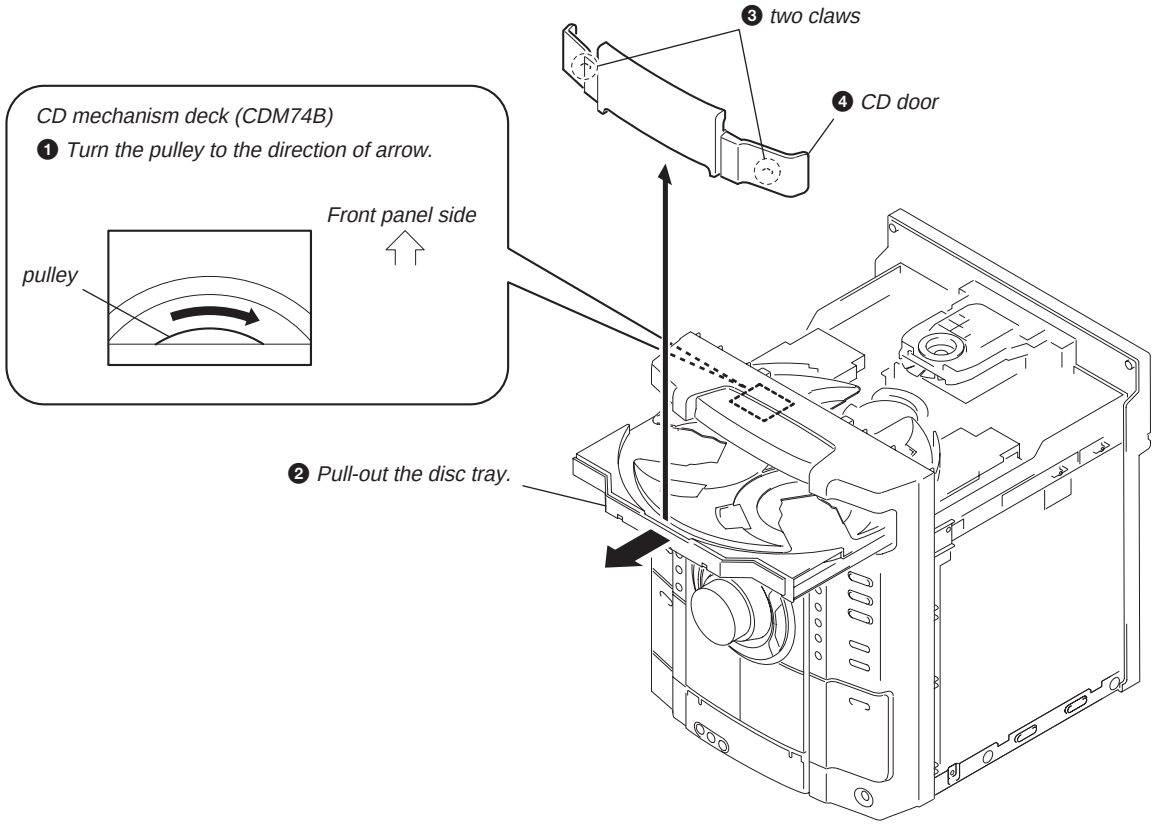


Note: Follow the disassembly procedure in the numerical order given.

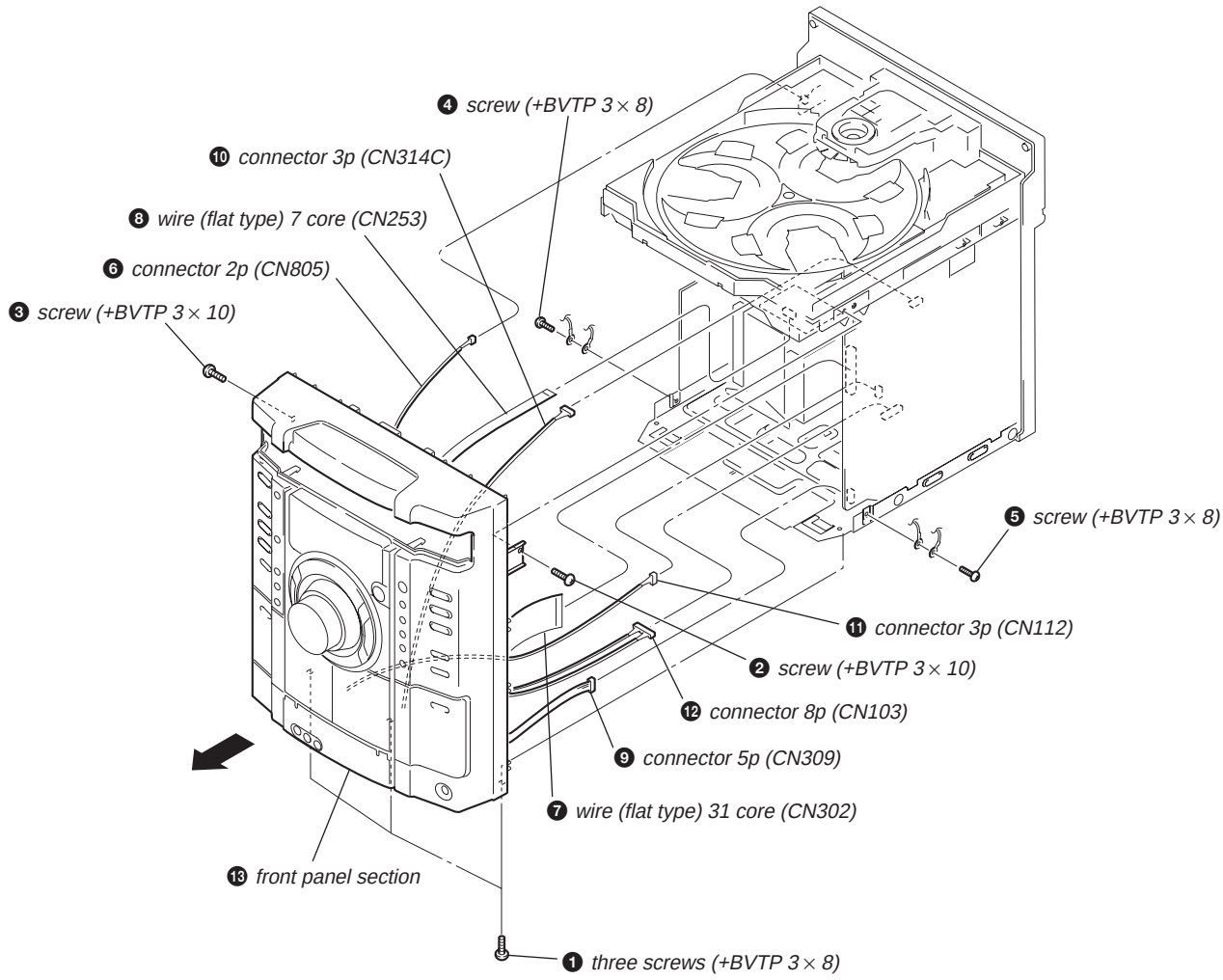
3-1. COVER (TOP)



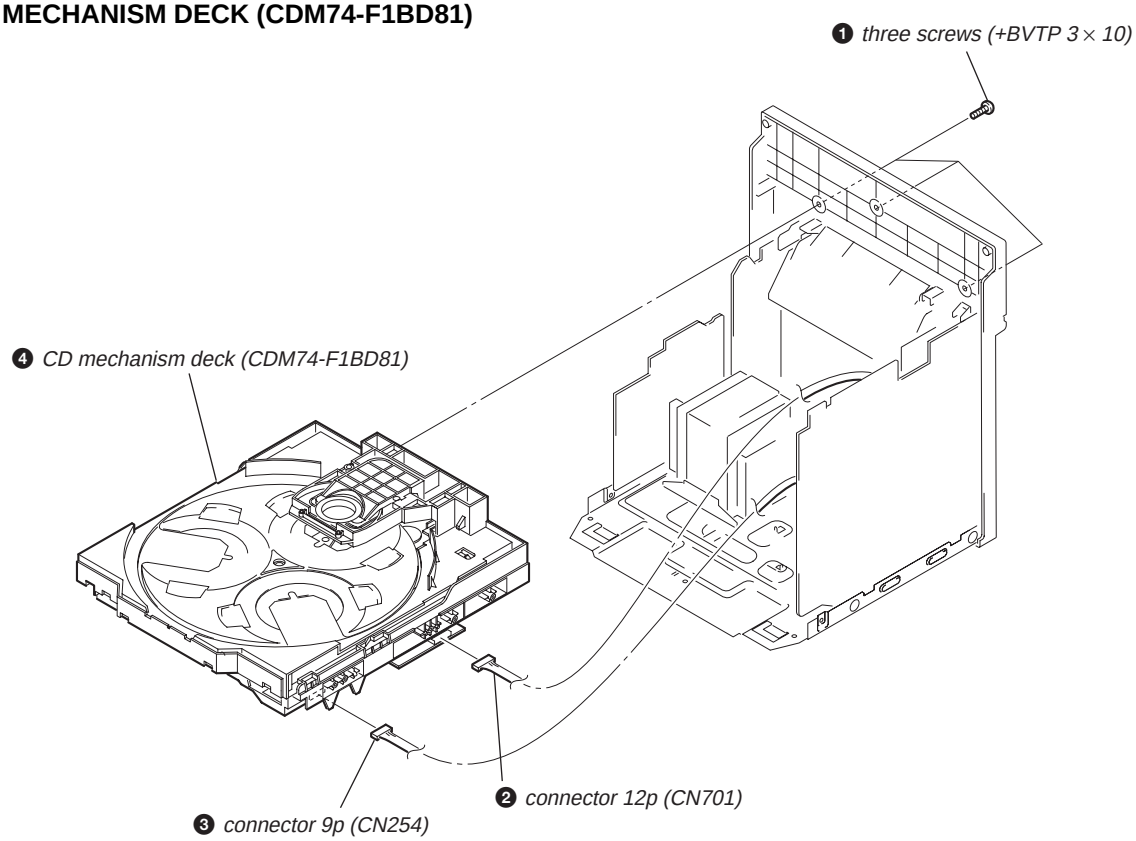
3-2. CD DOOR


❸ two claws
❹ CD door
CD mechanism deck (CDM74B)
❶ Turn the pulley to the direction of arrow.
Front panel side
pulley
❷ Pull-out the disc tray.

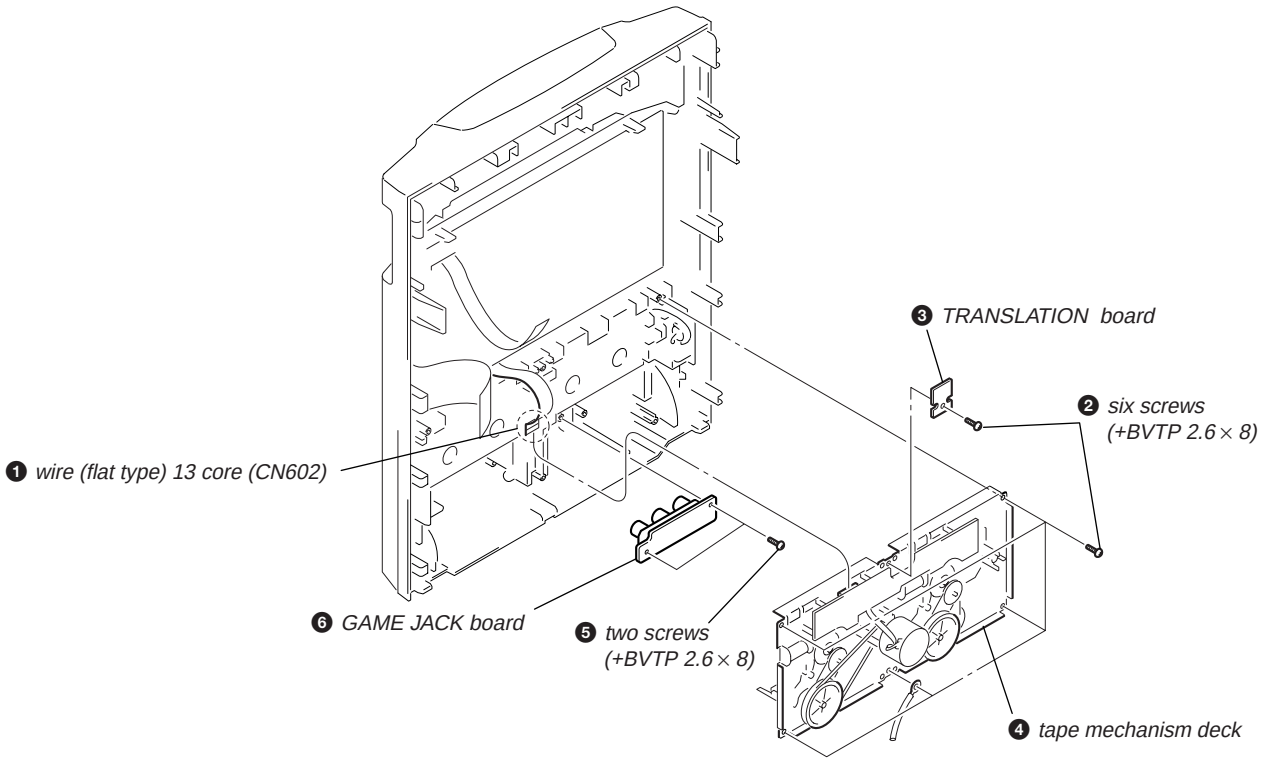
3-3. FRONT PANEL SECTION


❹ screw (+BVTP 3 × 8)
❿ connector 3p (CN314C)
❽ wire (flat type) 7 core (CN253)
❻ connector 2p (CN805)
❸ screw (+BVTP 3 × 10)
❺ screw (+BVTP 3 × 8)
⓫ connector 3p (CN112)
❷ screw (+BVTP 3 × 10)
⓬ connector 8p (CN103)
❾ connector 5p (CN309)
❼ wire (flat type) 31 core (CN302)
⓭ front panel section
❶ three screws (+BVTP 3 × 8)

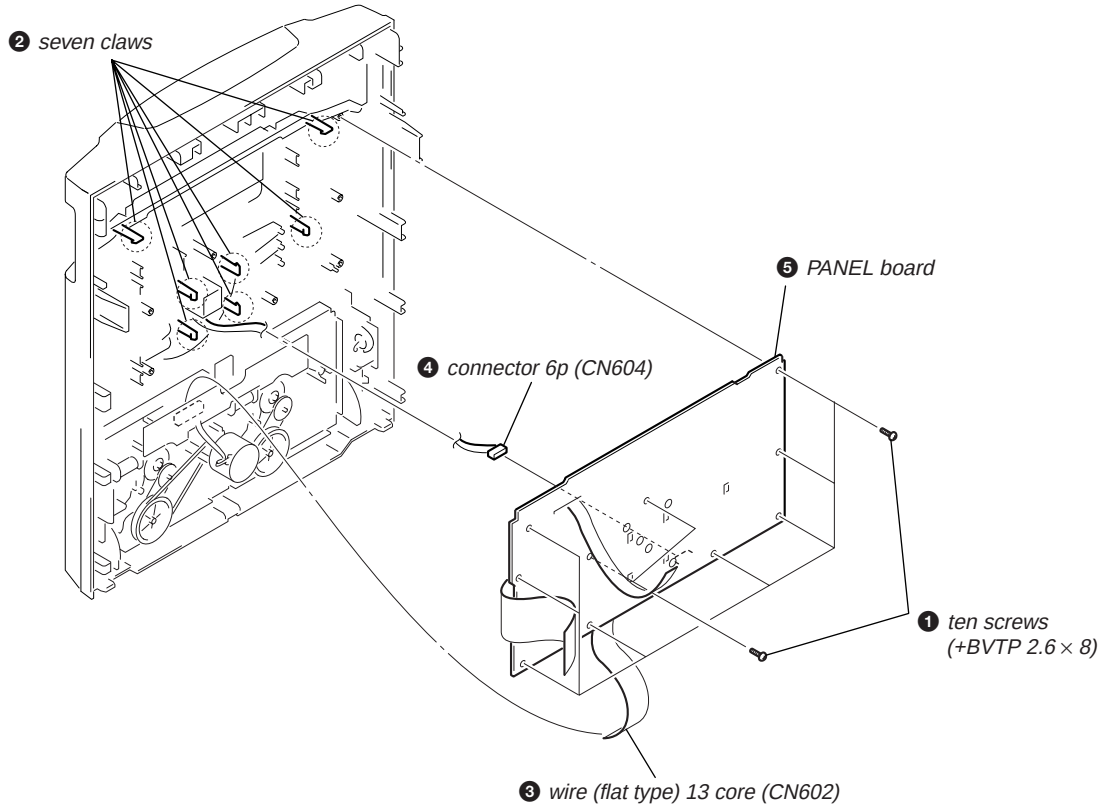
3-4. CD MECHANISM DECK (CDM74-F1BD81)



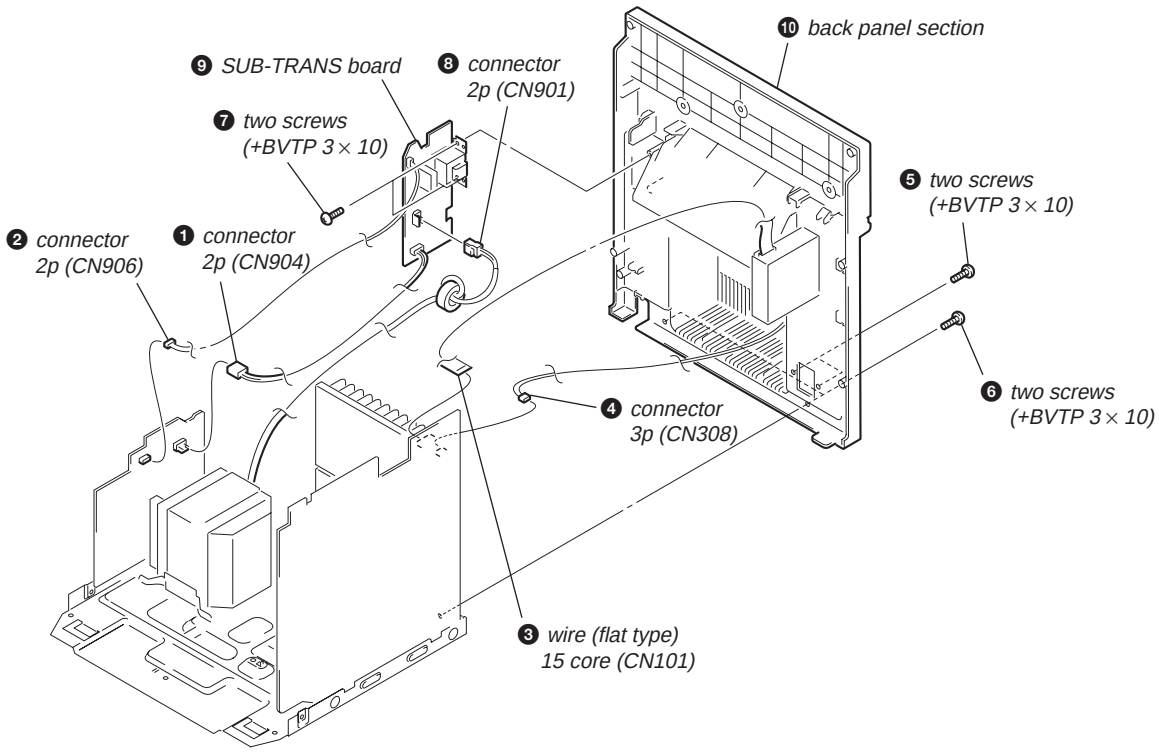
3-5. TAPE MECHANISM DECK, GAME JACK BOARD


❸ TRANSLATION board
❷ six screws (+BVTP 2.6× 8)
❶ wire (flat type) 13 core (CN602)
❻ GAME JACK board
❺ two screws (+BVTP 2.6× 8)
❹ tape mechanism deck

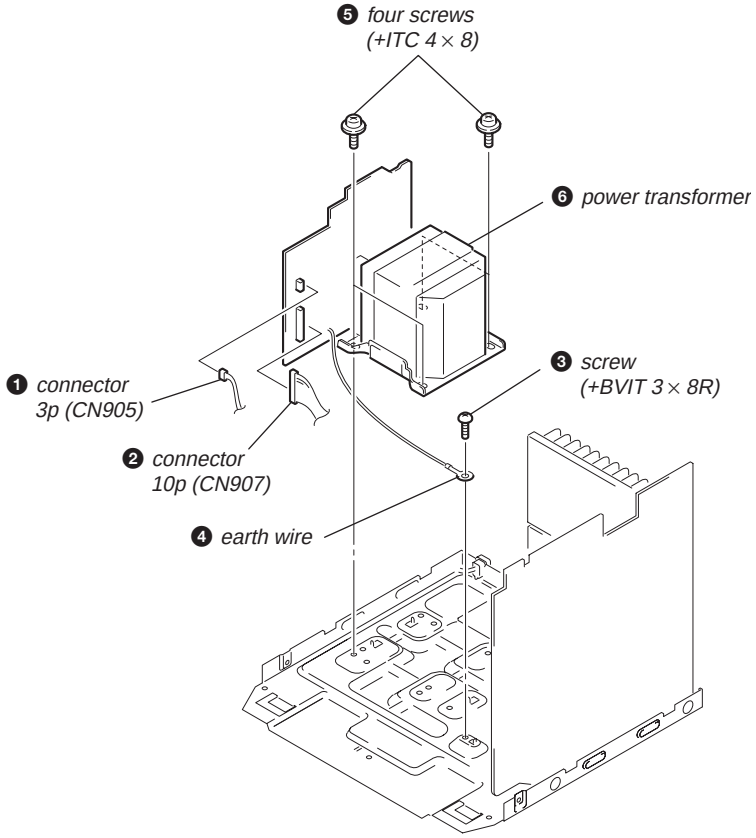
3-6. PANEL BOARD



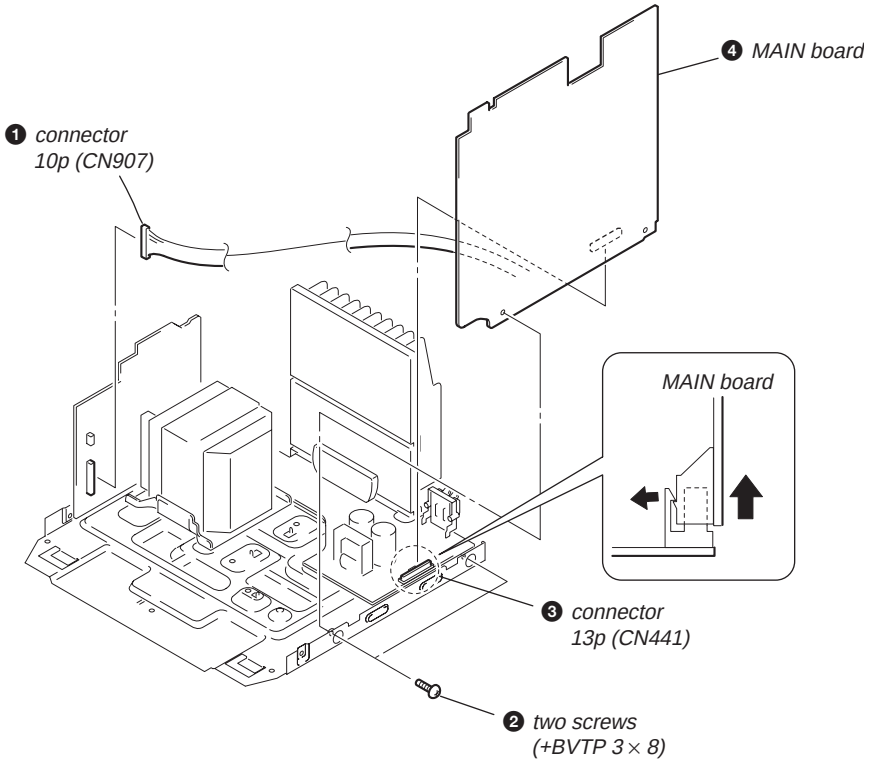
3-7. BACK PANEL SECTION, SUB-TRANS BOARD


❿ back panel section
❾ SUB-TRANS board
❽ connector 2p (CN901)
❼ two screws (+BVTP 3× 10)
❺ two screws (+BVTP 3× 10)
❷ connector 2p (CN906)
❶ connector 2p (CN904)
❹ connector 3p (CN308)
❻ two screws (+BVTP 3× 10)
❸ wire (flat type) 15 core (CN101)

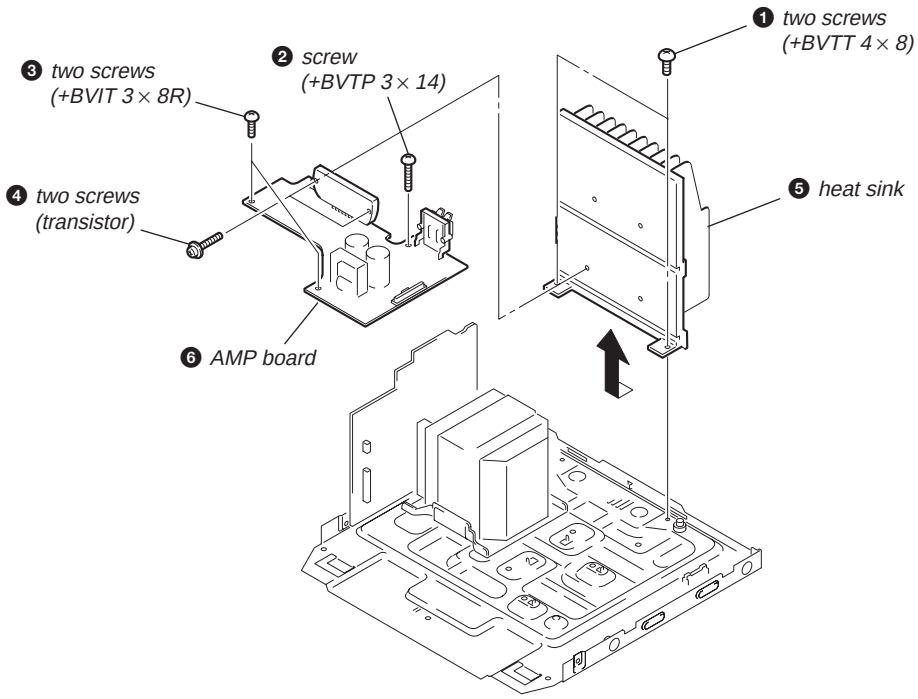
3-8. POWER TRANSFORMER



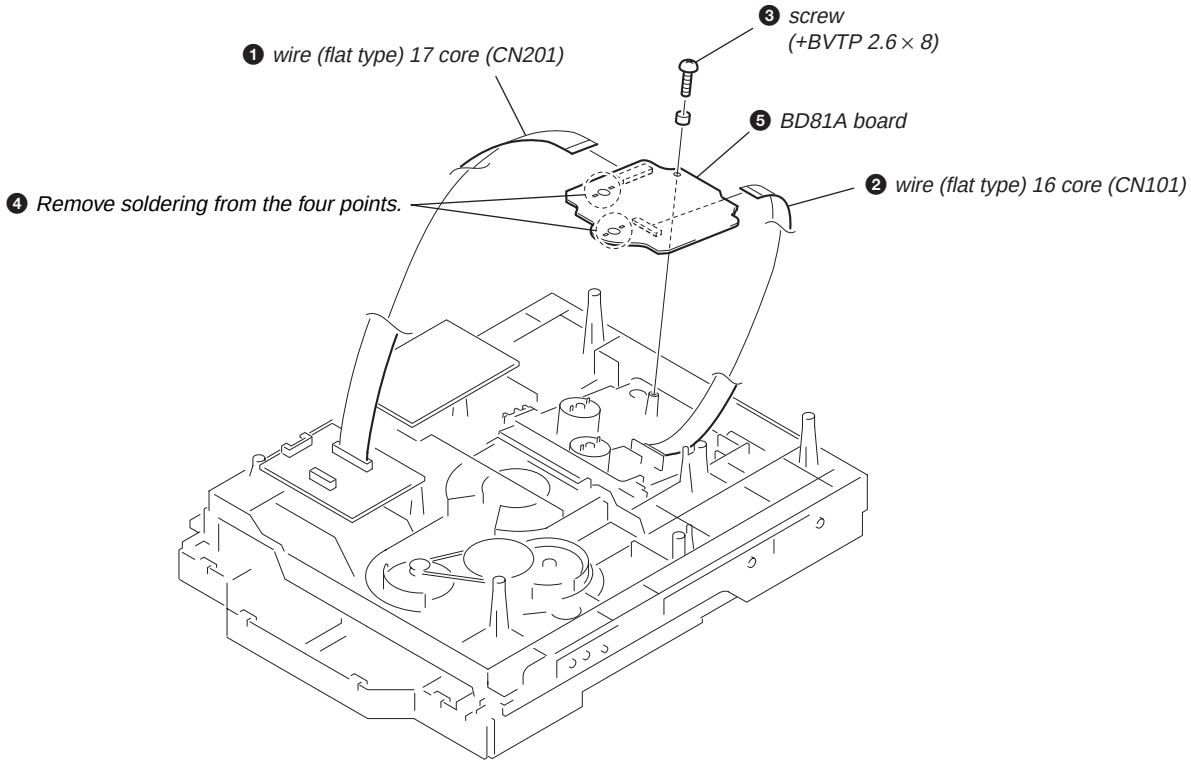
3-9. MAIN BOARD



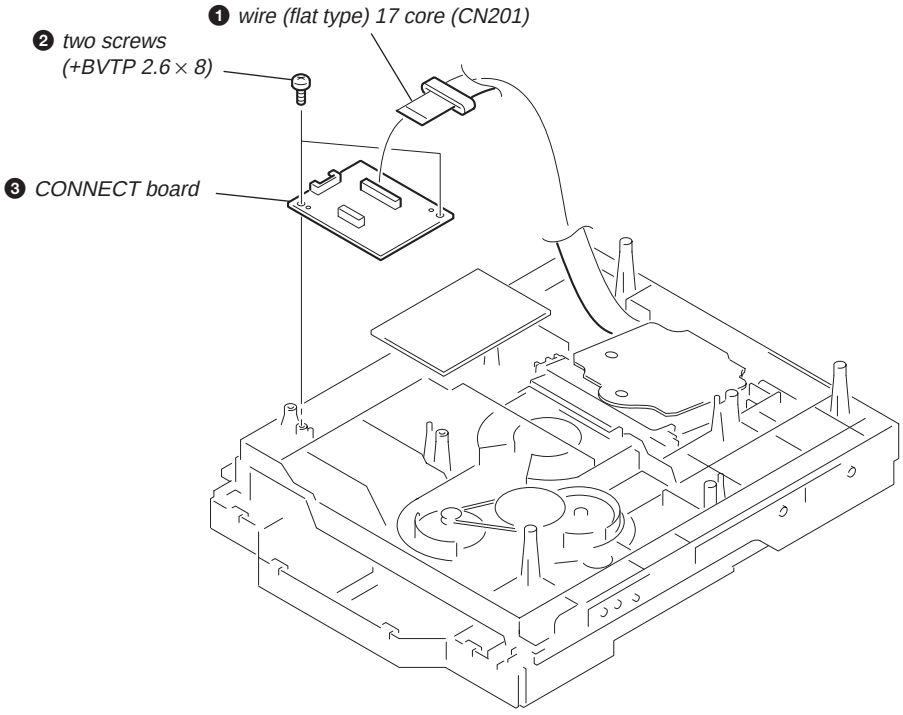
3-10. AMP BOARD



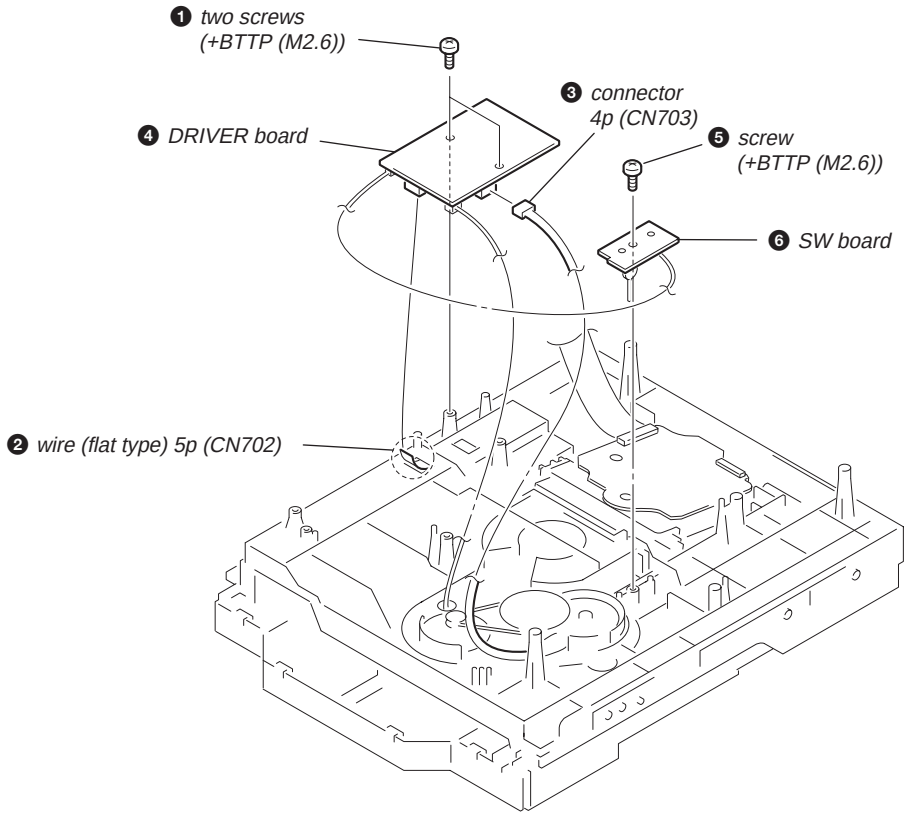
3-11. BD81A BOARD


❸ screw
(+BVTP 2.6 × 8)
❶ wire (flat type) 17 core (CN201)
❺ BD81A board
❷ wire (flat type) 16 core (CN101)
❹ Remove soldering from the four points.

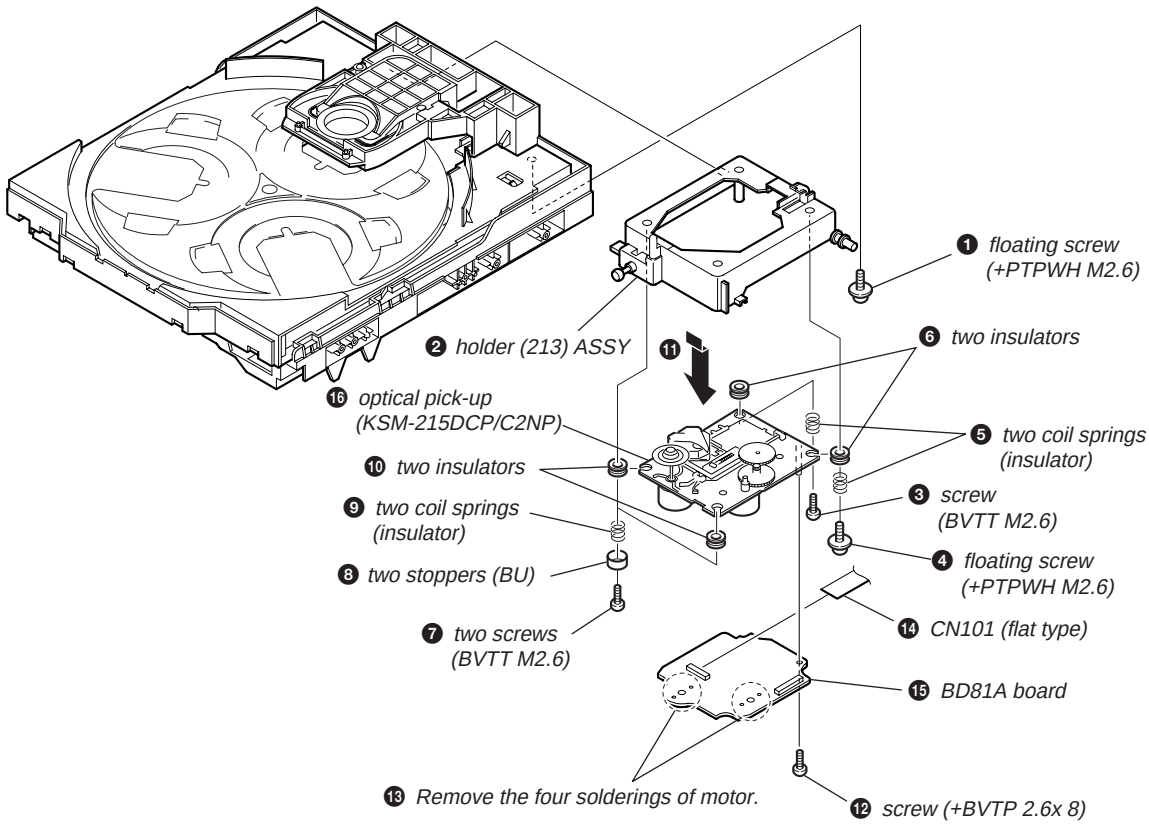
3-12. CONNECT BOARD



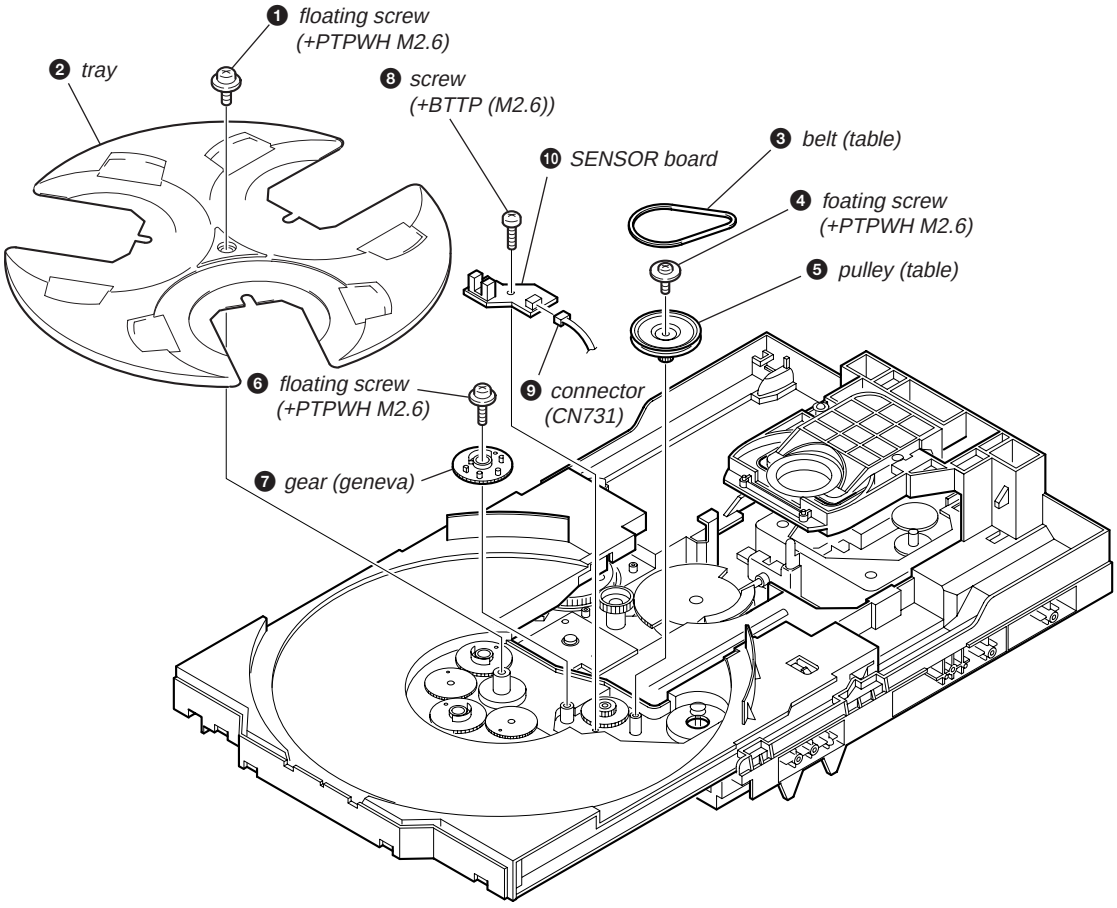
3-13. DRIVER BOARD, SW BOARD



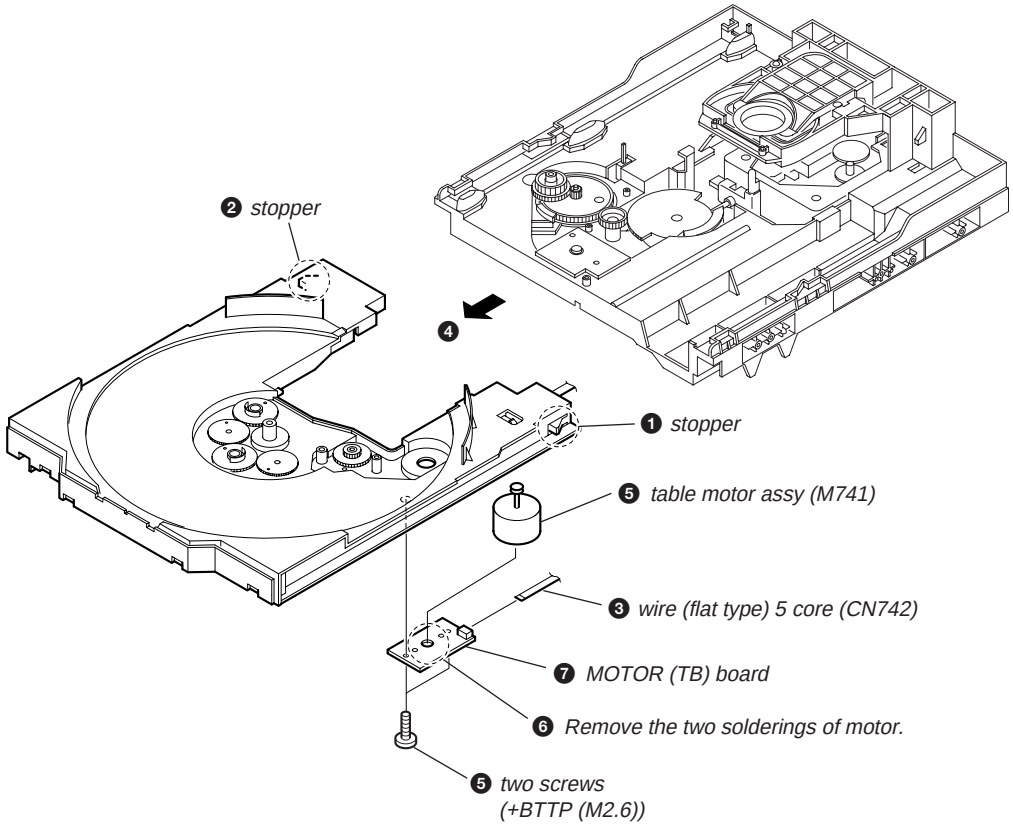
3-14. OPTICAL PICK-UP (KSM-215DCP/C2NP)



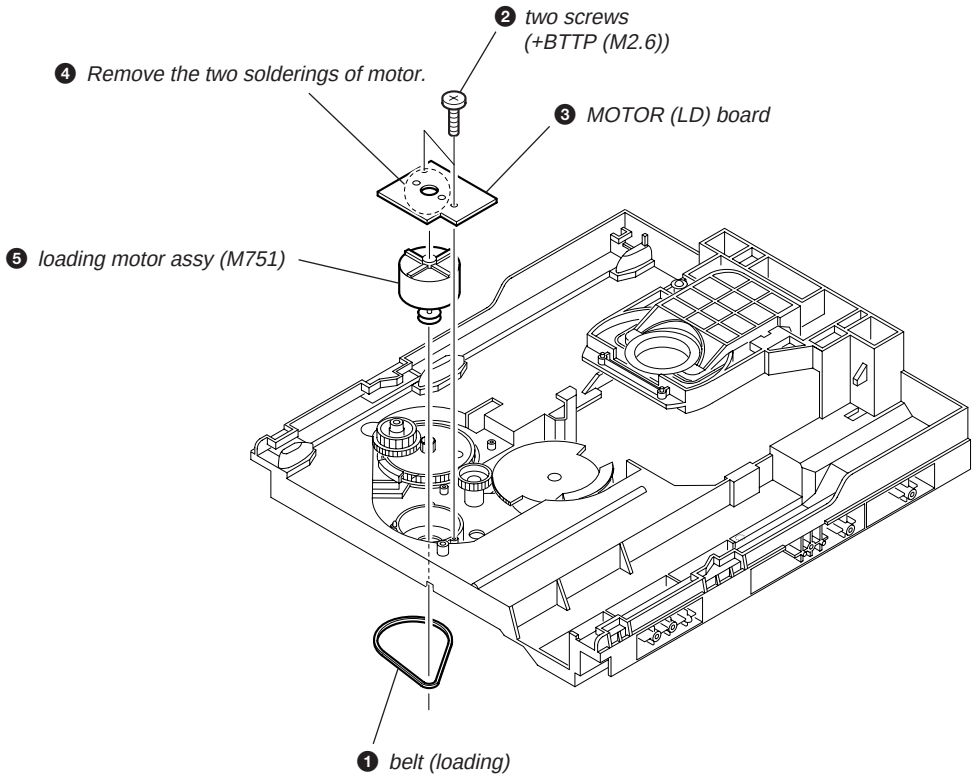
3-15. SENSOR BOARD



3-16. MOTOR (TB) BOARD


❷ stopper
❹
❶ stopper
❺ table motor assy (M741)
❸ wire (flat type) 5 core (CN742)
❼ MOTOR (TB) board
❻ Remove the two solderings of motor.
❺ two screws (+BTTP (M2.6))

3-17. MOTOR (LD) BOARD



SECTION 4
TEST MODE

[Change-over of AM Tuner Step between 9 kHz and 10 kHz]

- A step of AM channels can be changed over between 9 kHz and 10 kHz.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select the function "TUNER", and press [TUNER/BAND] button to select the BAND "AM".
3. Press [I/⏻] button to turn the set OFF.
4. Press [TUNER/BAND] and [I/⏻] buttons simultaneously, and the display of fluorescent indicator tube changes to "AM 9 k STEP" or "AM 10 k STEP", and thus the channel step is changed over.

[Cold Reset]

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons [■], [PLAY MODE/TUNING MODE], and [DISC 1] simultaneously.
2. The fluorescent indicator tube displays "COLD RESET" and the set is reset.

[Aging Mode]

This mode can be used for operation check of CD section and tape deck section.

- If an error occurred:
  The aging operation stops and is displayed status.
- If no error occurs:
  The aging operation continues repeatedly.

1. Operating method of Aging Mode

Turn on the main power and select "CD" of the function.

1) Set three discs in tray. Select ALL DISCS, and REPEAT OFF.
2) Load the tapes recording use into both decks.
3) Press three buttons [■], [PLAY MODE/TUNING MODE], and [EX-CHANGE] simultaneously.
4) Aging operations of CD and tape are started at the same time.
5) To exit the aging mode, perform [Cold Reset].

2. Aging mode in CD section

1) Operation during aging mode

- In the agining mode ,the program is excuted in the following sequence.

(1) The disc tray opens and closes.
(2) The disc tray turns to select a disc 3.
(3) The pick-up accesses to the first track, and plays 3 seconds.
(4) The pick-up accesses to the last track, and plays 3 seconds.
(5) The disc tray opens and closes.
(6) The disc tray turns to select a disc 1.
(7) The same operation starts like step (3).
(8) After a disc 1 aging operation, a disc 2 is selected.
(9) When an aging operation of a disc 3 is completed, the display "AGING ****" value increases.
(10) If no error occurs, the aging operation continues repeatedly.

2) Error display

Disc error	
Display	Error
E00D01022	Focus error (No disc)
E00D02022	Sub Q error (Focus is good)
E00D02023	TOC reading error
E00D02014	Access error (Unable within regular time)

Mechanism error	
Display	Error
E00M__E_0	Error during opening tray
E00M__C_2	EX-CHANGE disc error
E00M__D_0	Error during closing tray
E00M__F_3	EX-OPEN error
E00M__D_5	EX-CLOSE error
E00M__C_2	Chuck-up error
E00M__C_3	Unchucking error

3. Aging mode in Tape Deck section

1) Operation during aging mode

- In the agining mode, the program is excuted in the following sequence.

Step	Operation	Display
1	Rewind the TAPE A	TAPE AAG-1
2	Rewind the TAPE B	TAPE BAG-2
3	Play the TAPE A (1 minute)	TAPE AAG-2
4	Stop the TAPE A (1 second)	TAPE AAG-3
5	Play the TAPE A (3 minutes)	TAPE AAG-4
6	Rewind(AMS) the TAPE A	TAPE AAG-5
7	F.F.(AMS) the TAPE A	TAPE AAG-6
8	Play the TAPE B (1 minute)	TAPE BAG-2
9	Stop the TAPE B (1 second)	TAPE BAG-3
10	Record the TAPE B (3 minutes)	TAPE BAG-4
11	Rewind(AMS) the TAPE B	TAPE BAG-5
12	F.F.(AMS) the TAPE B	TAPE BAG-6

2) Error display

- If error occurred, the display remains like "TAPE BAG-2".

4. Exiting from the aging mode

- Be sure to perform Cold Reset to exit from the aging mode.

[PANEL Test Mode]

- All fluorecent segments and LEDs are tested.
- Keyboard check.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. To enter the test mode, press the three buttons ■, PLAY MODE/TUNING MODE and ENTER simultaneously.
3. All segments and LEDs (without STANDBY LED) are turned on.
4. Press ▮▮ and ENTER buttons simultaneously, and the key check mode is activated.
5. The message “KEY 0 0 0 ” is displayed.
   Each time a button is pressed, the key code number is displayed.
6. Press ▮▮ and ENTER buttons simultaneously, and the key count mode is activated.
7. The message “KEYCNT 0” is displayed.
   Each time a button is pressed, “KEYCNT 0” value increased. However, once a button is pressed, it is no longer taken into account.
8. Press ▮▮ and ENTER buttons simultaneously, and the head phone detect mode is activated.
9. The message “H_P OFF” is displayed when a headphone jack is not inserted.
   “H_P ON ” is displayed when a headphone jack is inserted.
10. Press ▮▮ and ENTER buttons simultaneously, and the volume control detect mode is activated.
11. The message “VOLUME FLAT” is displayed.
    “VOLUME UP” is displayed if rotating MASTER VOLUME knob clockwise, or “VOLUME DOWN” is displayed if rotating counterclockwise.
12. To exit from the GC test mode after the head phone detect mode, press ▮▮ and ENTER buttons simultaneously.

[Version and Destination Display Mode]

- The version or destination is displayed.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. To enter the test mode, press the three buttons ■, PLAY MODE/TUNING MODE and DISC 2 simultaneously.
3. The destination is displayed.
4. Press DISPLAY buttons simultaneously.
5. The version is displayed.
6. To exit from this mode, press I/⏻ button to turn the set OFF.

[CD Service Mode]

- This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pick-up.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select the function “CD”.
3. To enter the test mode, press three buttons ■, PLAY MODE/TUNING MODE , and ⏏ simultaneously.
4. The CD service mode is selected.
5. With the CD in stop status, press ▶▶ button to move the pick-up to outside track, or press ◀◀ button to inside track.
6. To exit from this mode, perform as follows:
   1) Move the pick-up to the most inside track.
   2) Press I/⏻ button to turn the set OFF.

Note:
- Always move the pick-up to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

[MC Test Mode]

- This mode is used to test the function of the equalizer.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. To enter the test mode, press the three buttons ■, PLAY MODE/TUNING MODE and DISC 3 simultaneously.
3. Press the EQ + button.
   The function of the equalizer is set to “MIN”.
4. Press the EQ - button.
   The function of the equalizer is set to “MAX”.
5. Press the PRESET EQ button.
   The function of the equalizer is set to “EQ FLAT”.
6. MASTER VOLUME up and down.
   “VOLUME MIN” “VOLUME 16” “VOLUME MAX” is displayed.
7. Press the GROOVE button.
   The message “VACS OFF” or “VACS ON” is displayed.
8. To exit from this mode, press I/⏻ button to turn the set OFF.

[CD Ship Mode (LOCK)]

- This mode moves the pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select the function “CD”.
3. Press I/⏻ button to turn the set OFF.
4. Press CD button and I/⏻ button simultaneously.
5. The “STANDBY” display blinks instantaneously, and the CD ship mode is set.

[CD Ship (LOCK) & COLD RESET MODE]

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select the function “CD”.
3. Press I/⏻ button to turn the set OFF.
4. Press three buttons ■ , CD and DISPLAY simultaneously.
5. The “STANDBY” display blinks instantaneously and CD ship mode is set.
6. To fluorescent indicator tube displays “COLD RESET” and the set is reset.

[Disc Tray Lock]

Procedure:

1. Press the I/⏻ button to turn the set ON.
2. Press two buttons of ■ and ⏏ simultaneously for five seconds.
3. The message “LOCKED” is displayed and the tray is locked. (Even if exiting from this mode, the tray is still locked.)
4. Press two buttons of ■ and ⏏ simultaneously for five seconds again.
5. The message “UNLOCKED” is displayed and the tray is unlocked.
6. To exit from this mode, press the I/⏻ button to turn the set OFF.

[CD Repeat 5 Times Limit Release Mode]

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select the function “CD”.
3. Press three buttons [■] , [CD] and [ENTER] simultaneously.
4. The message “LIMIT OFF” is displayed.
5. Press [I/⏻] button the set OFF.

[AMP TEST MODE]

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. To enter the test mode, press three buttons [■] , [PLAY MODE/TUNING MODE] and [ENTER] simultaneously.
3. Press the [DISPLAY] button.
   The message “V0 0 0” “ 000” is displayed.
4. Press the [GROOVE] button.
   The message “DBFB ON” “DBFB OFF” is displayed.
5. Press the [SURROUND] button.
   The message “SURROUND ON” “SURROUND OFF” is displayed.
6. Press the [EQ BAND] button.
   The message “LOW” “MID” “HIGH” is displayed.
7. Press [I/⏻] button to turn the set OFF.

MEMO

SECTION 5
DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

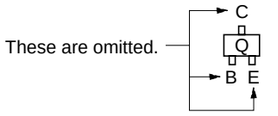
- ▬ : B+ Line.
- ▬ ▬ : B– Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
  no mark : FM
  ( ) : CD STOP
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : TUNER
  : PB (DECK A)
  : PB (DECK B)
  : REC (DECK B)
  : CD
  : AUDIO

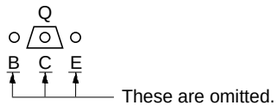
Note on Printed Wiring Boards:

- o——— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

Caution:	
Pattern face side: (SIDE A)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (SIDE B)	Parts on the parts face side seen from the parts face are indicated.

- Indication of transistor.

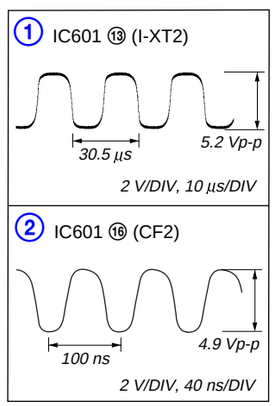




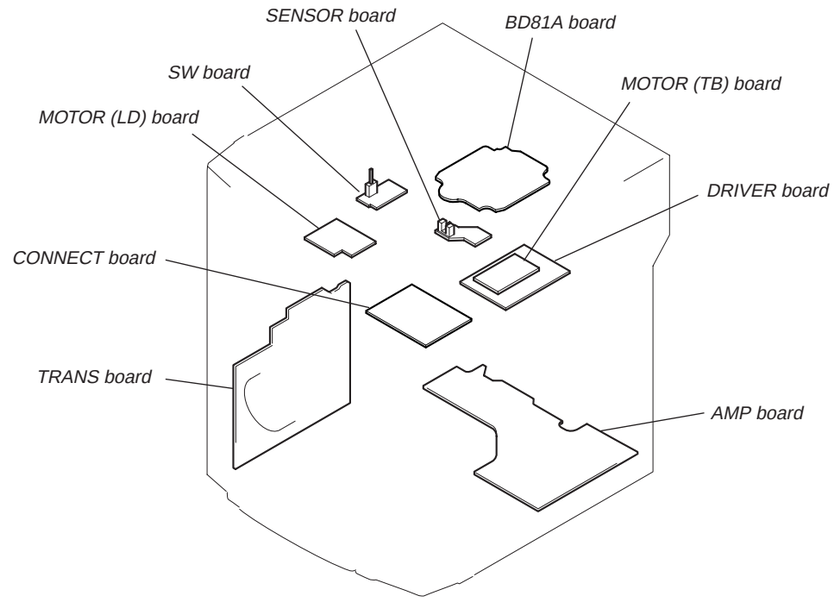
- Abbreviation
  AUS : Australian model
  E3 : 240V AC Area in E model
  E15 : Iran model
  EA : Saudi Arabia model
  RU : Russian model
  SP : Singapore model

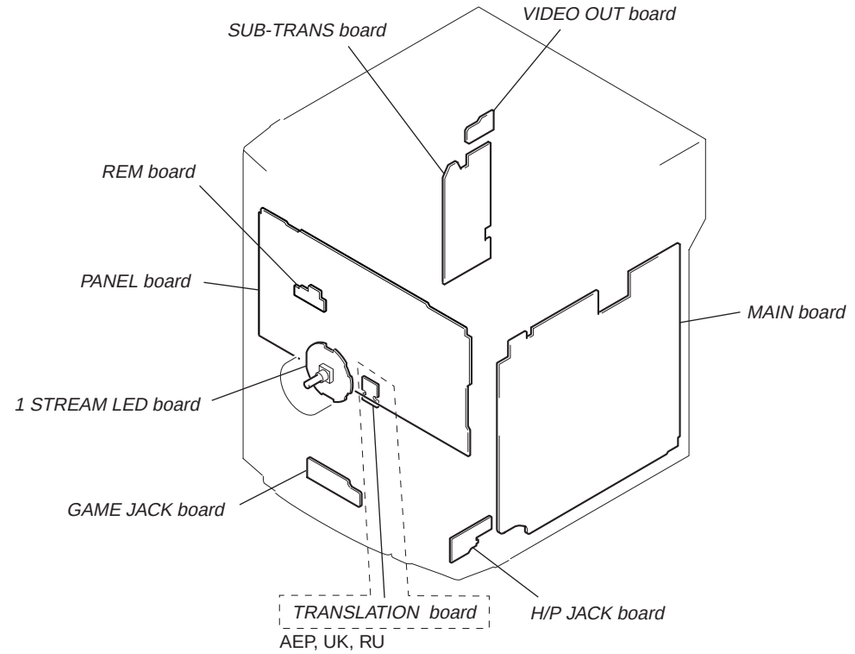
• Waveforms

– PANEL BOARD –

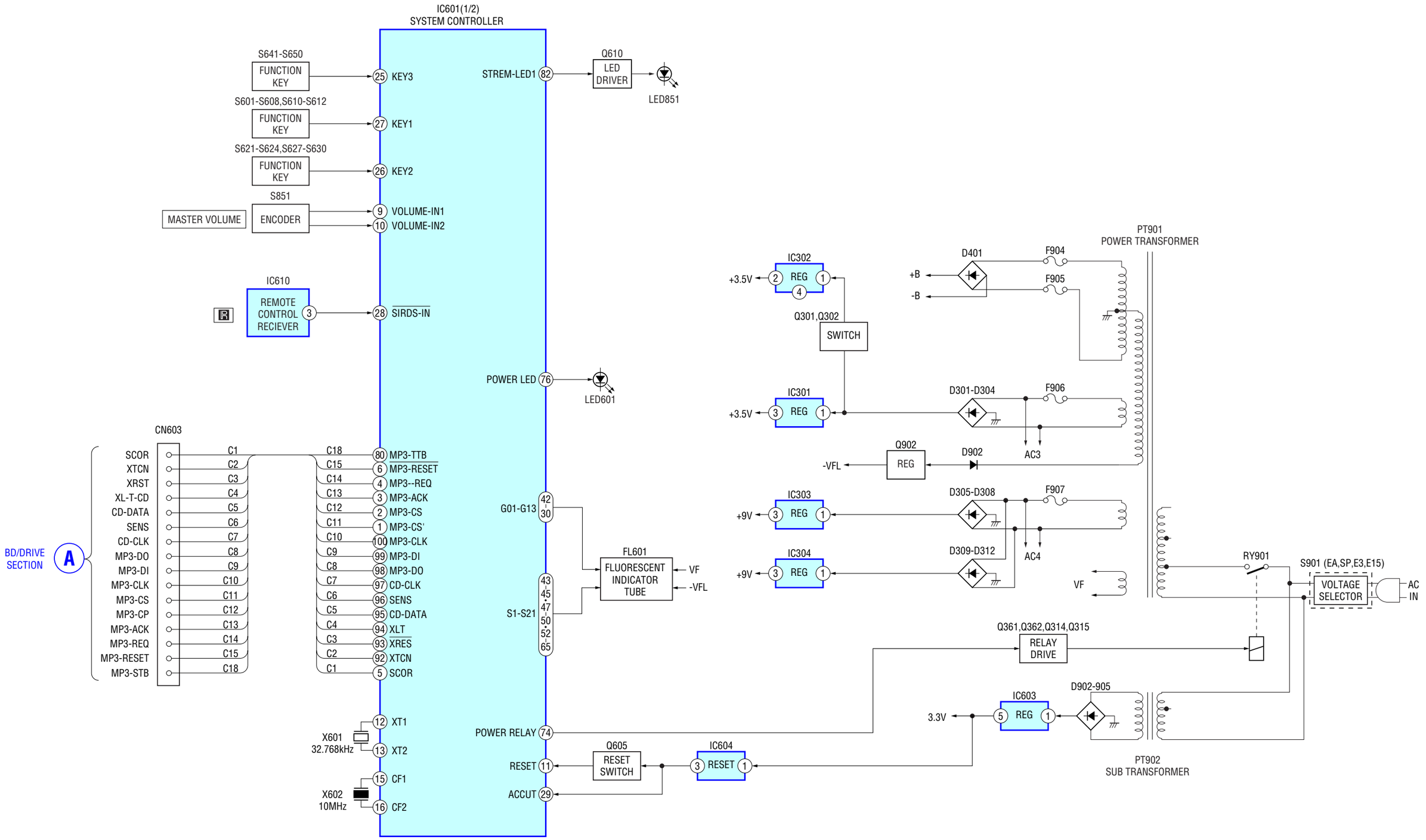


Circuit Boards Location

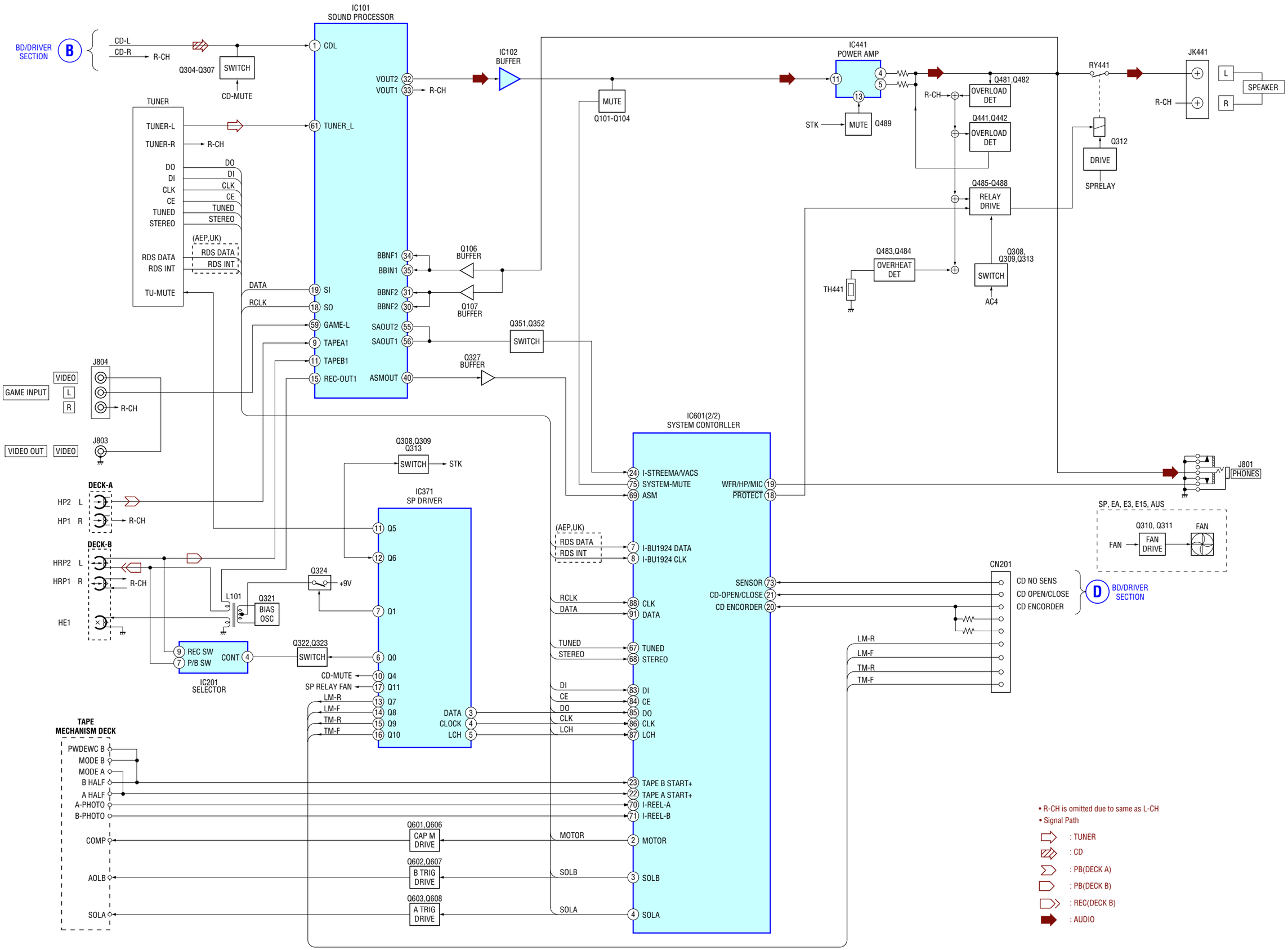




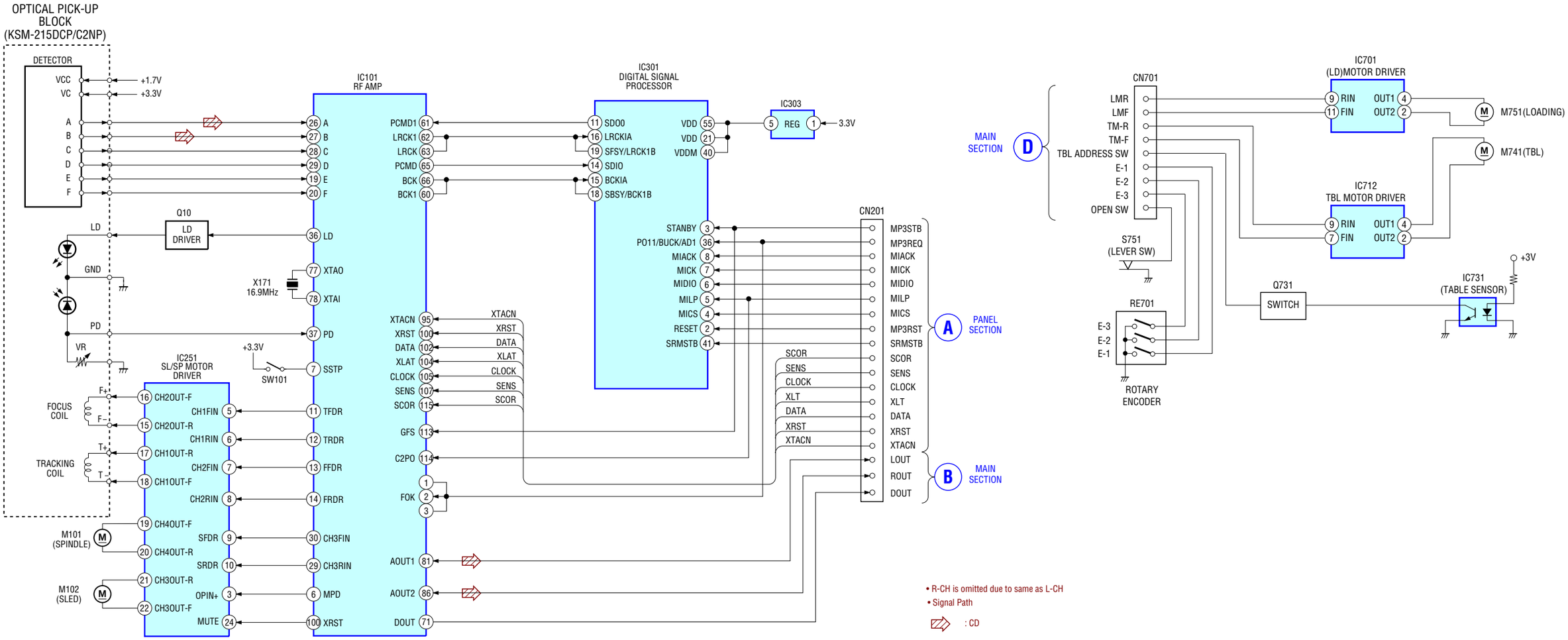
5-1. BLOCK DIAGRAMS – PANEL SECTION –



– MAIN SECTION –



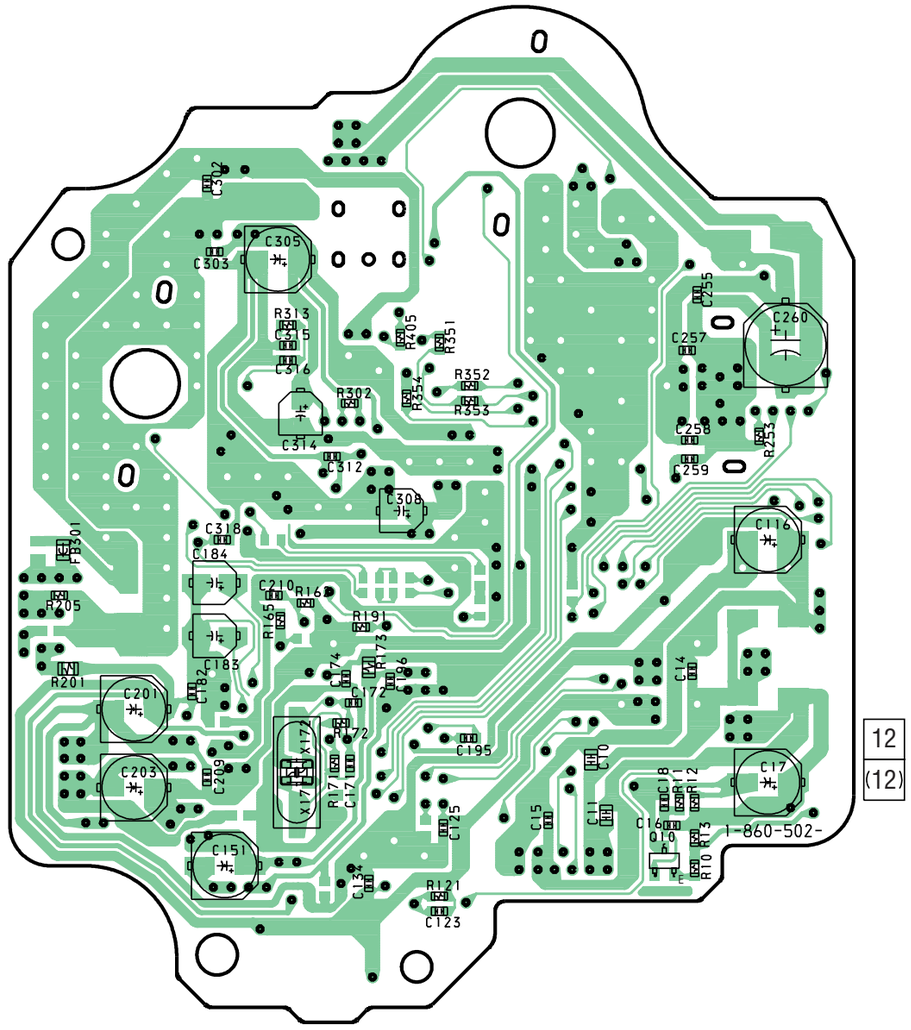
– BD/DRIVER SECTION –



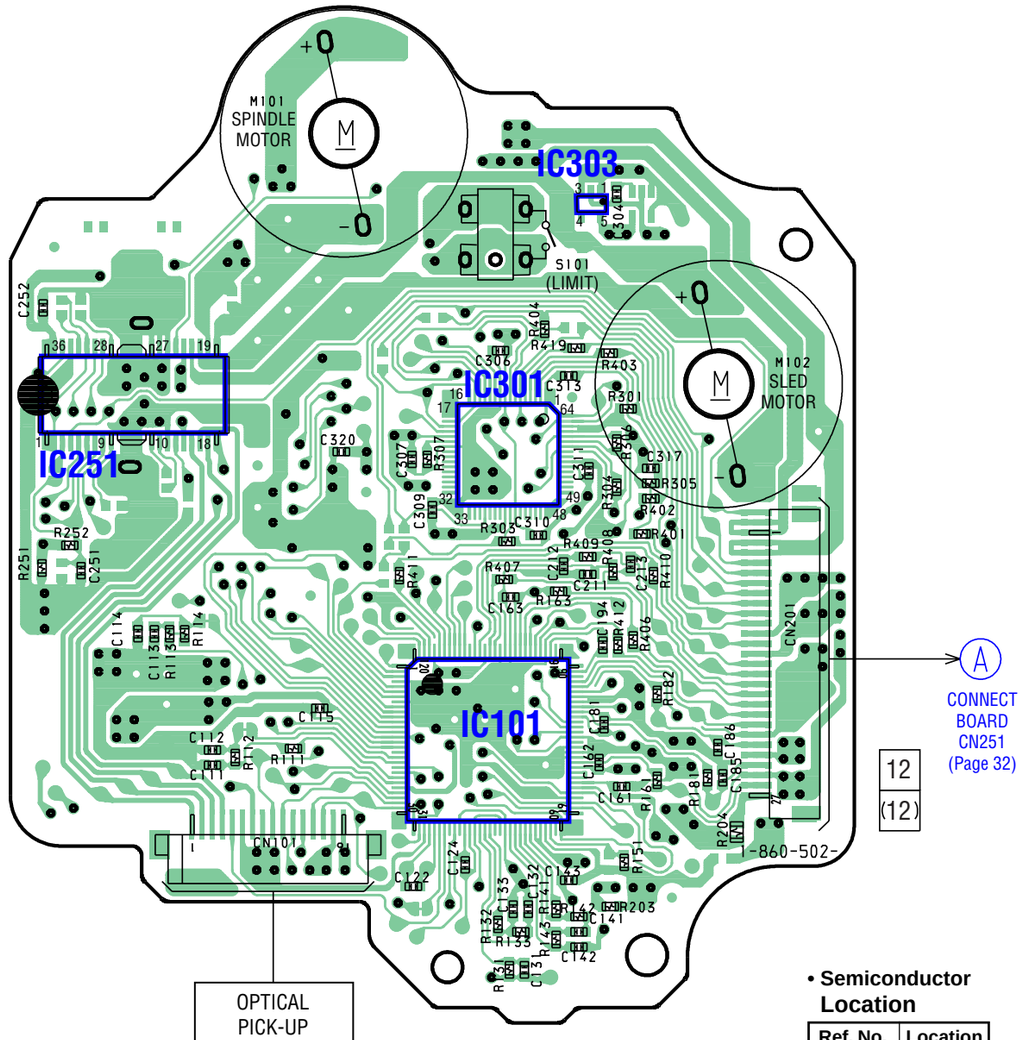
5-2. PRINTED WIRING BOARD – BD81A SECTION –

• See page 21 for Circuit Boards Location. • : Uses unleaded solder.

【BD81A BOARD】(SIDE A)



【BD81A BOARD】(SIDE B)

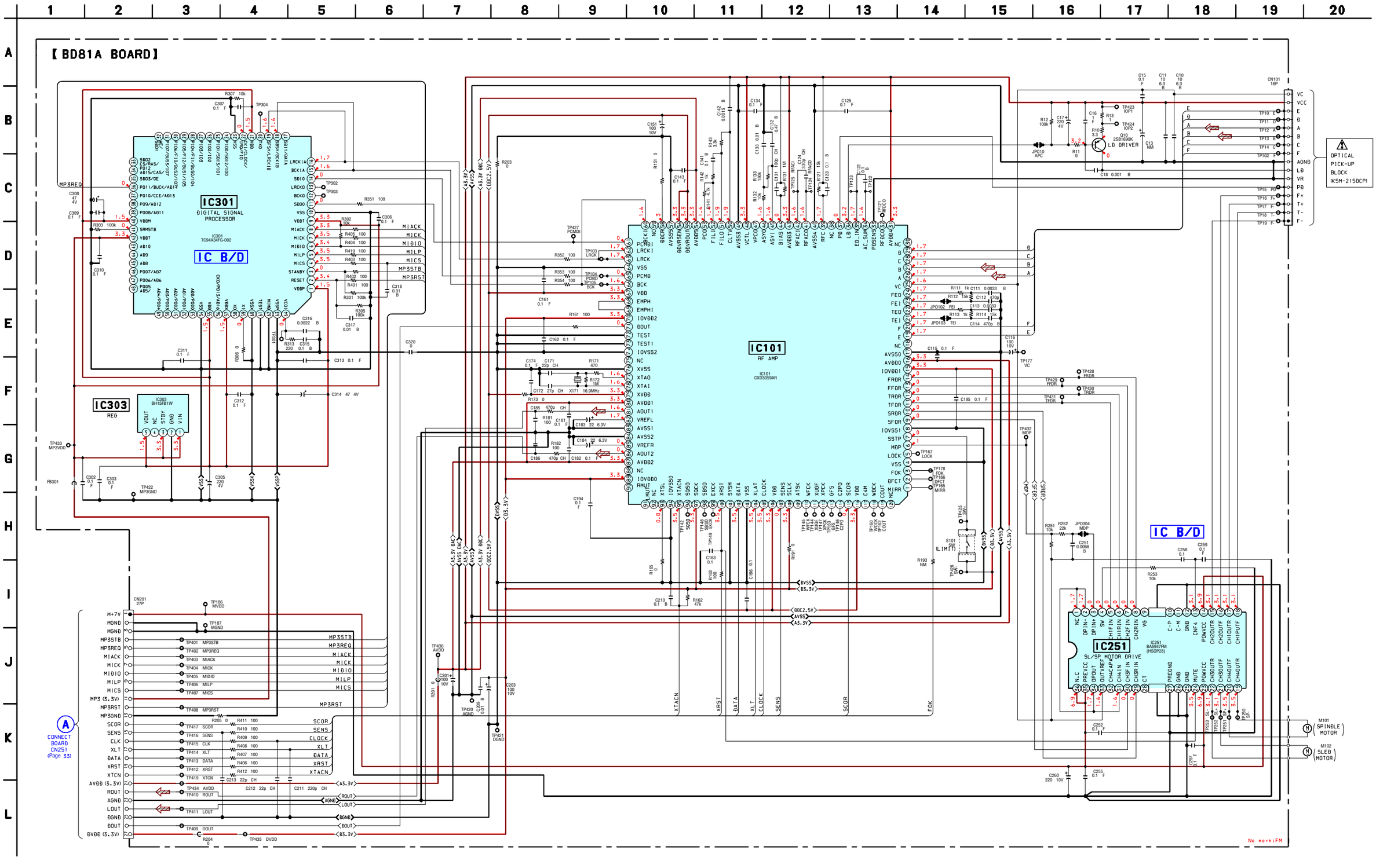


• **Semiconductor Location**

Ref. No.	Location
IC101	D-7
IC251	C-6
IC301	C-7
IC303	B-7
Q10	E-4

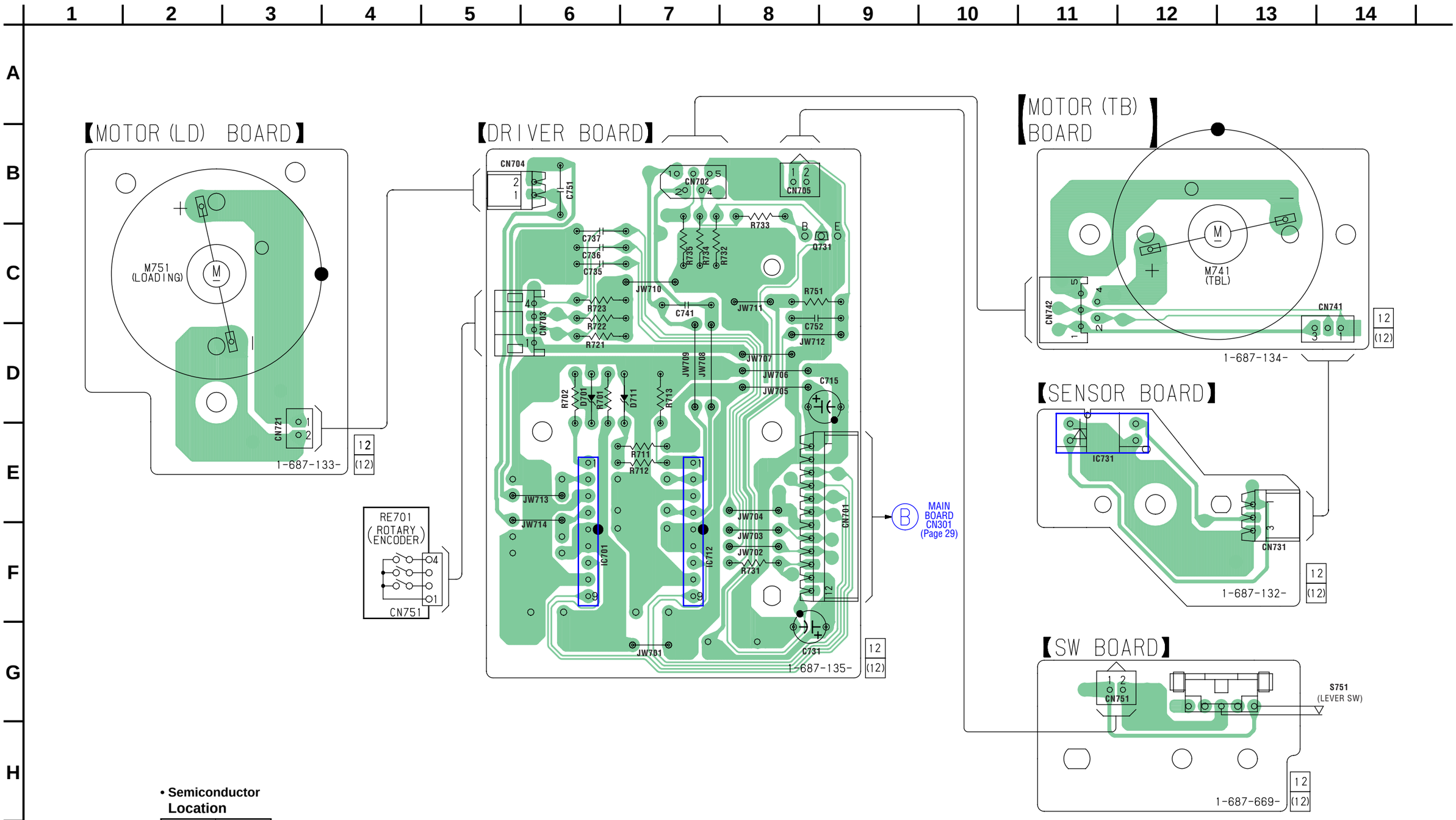
5-3. SCHEMATIC DIAGRAM – BD81A SECTION –

• See page 44 for IC PIN FUNCTION DESCRIPTION.



5-4. PRINTED WIRING BOARD – CD MECHANISM SECTION –

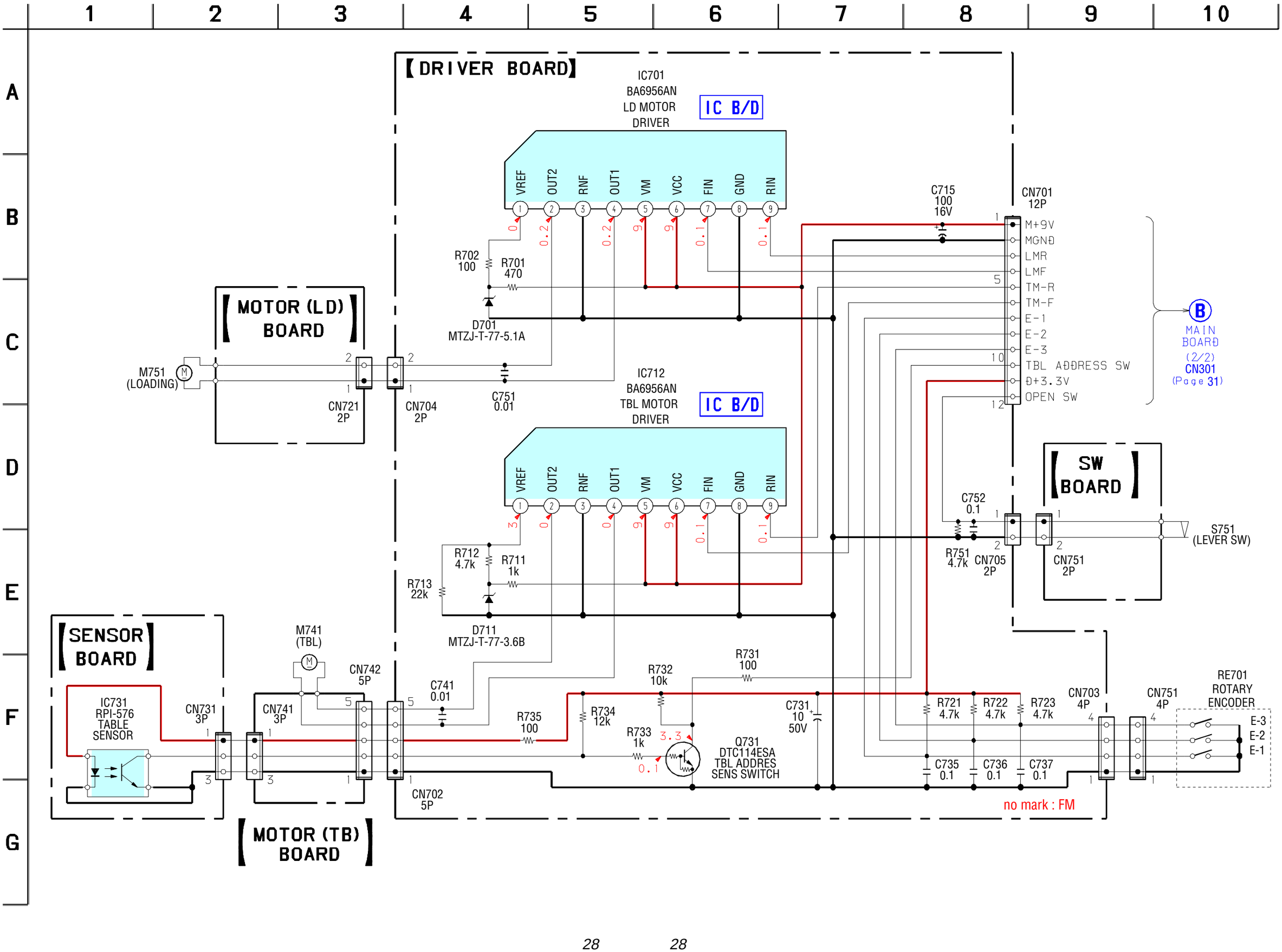
• See page 21 for Circuit Boards Location.



• **Semiconductor Location**

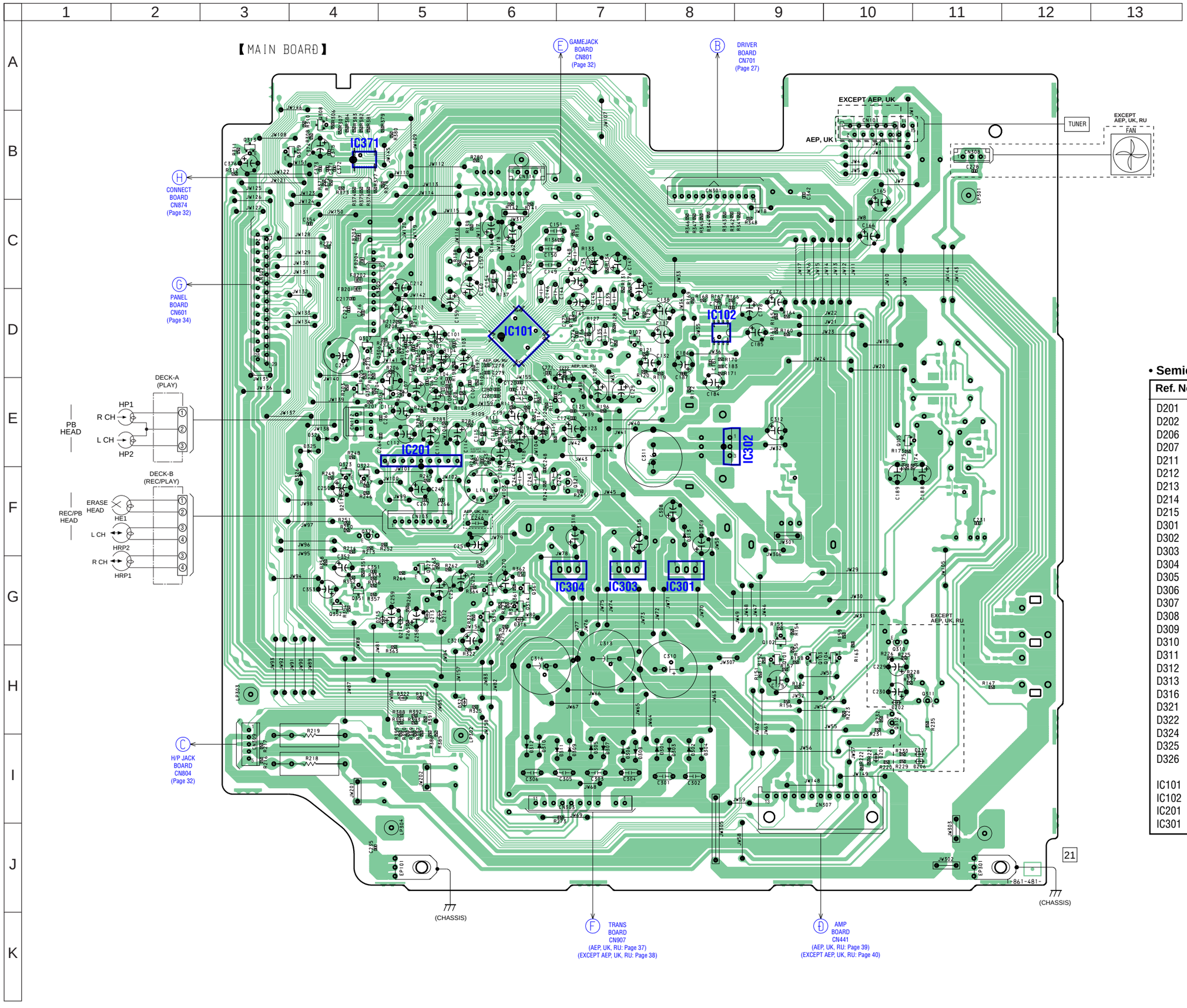
Ref. No.	Location
D701	D-6
D711	D-7
IC701	F-6
IC712	F-7
IC731	E-11
Q731	C-9

5-5. SCHEMATIC DIAGRAM – CD MECHANISM SECTION –



5-6. PRINTED WIRING BOARD – MAIN SECTION –

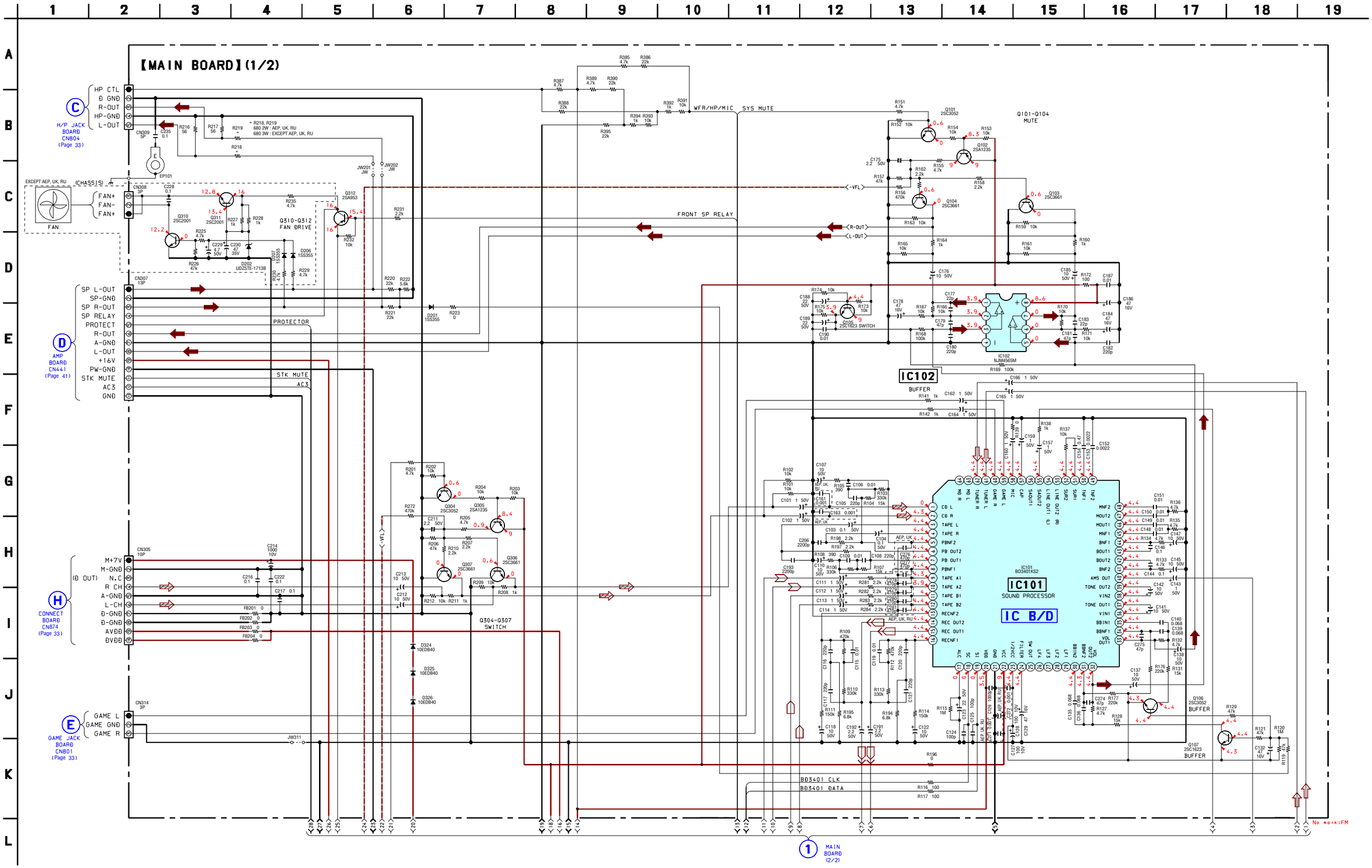
• See page 21 for Circuit Boards Location. • : Uses unleaded solder.



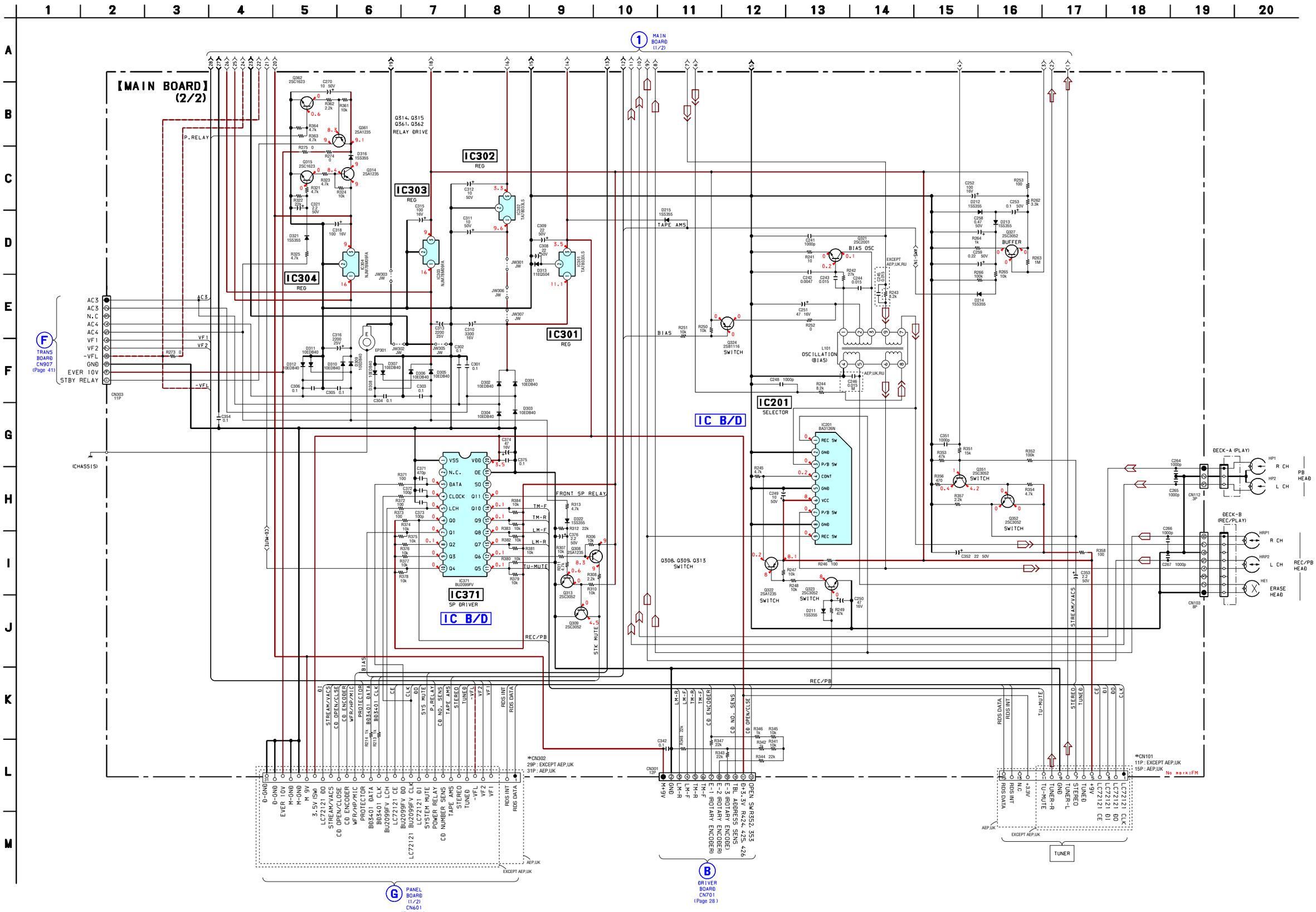
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D201	I-10	IC302	E-9
D202	H-10	IC303	G-7
D206	I-10	IC304	G-7
D207	I-10	IC371	B-4
D211	F-4		
D212	G-5	Q101	H-9
D213	G-5	Q102	H-9
D214	G-5	Q103	H-9
D215	G-4	Q104	H-10
D301	I-8	Q105	E-11
D302	I-8	Q106	D-7
D303	I-8	Q107	D-7
D304	I-8	Q304	E-4
D305	I-7	Q305	E-4
D306	I-7	Q306	B-4
D307	I-7	Q307	B-4
D308	I-7	Q308	B-4
D309	I-7	Q309	B-3
D310	I-6	Q310	H-10
D311	I-6	Q311	H-11
D312	I-6	Q312	H-10
D313	F-8	Q313	B-3
D316	G-6	Q314	G-6
D321	H-5	Q315	G-6
D322	H-5	Q321	F-7
D324	E-4	Q322	F-4
D325	E-4	Q323	F-4
D326	F-4	Q324	F-4
		Q327	G-5
IC101	D-6	Q351	G-4
IC102	D-8	Q352	G-4
IC201	E-5	Q361	G-6
IC301	G-8	Q362	G-6

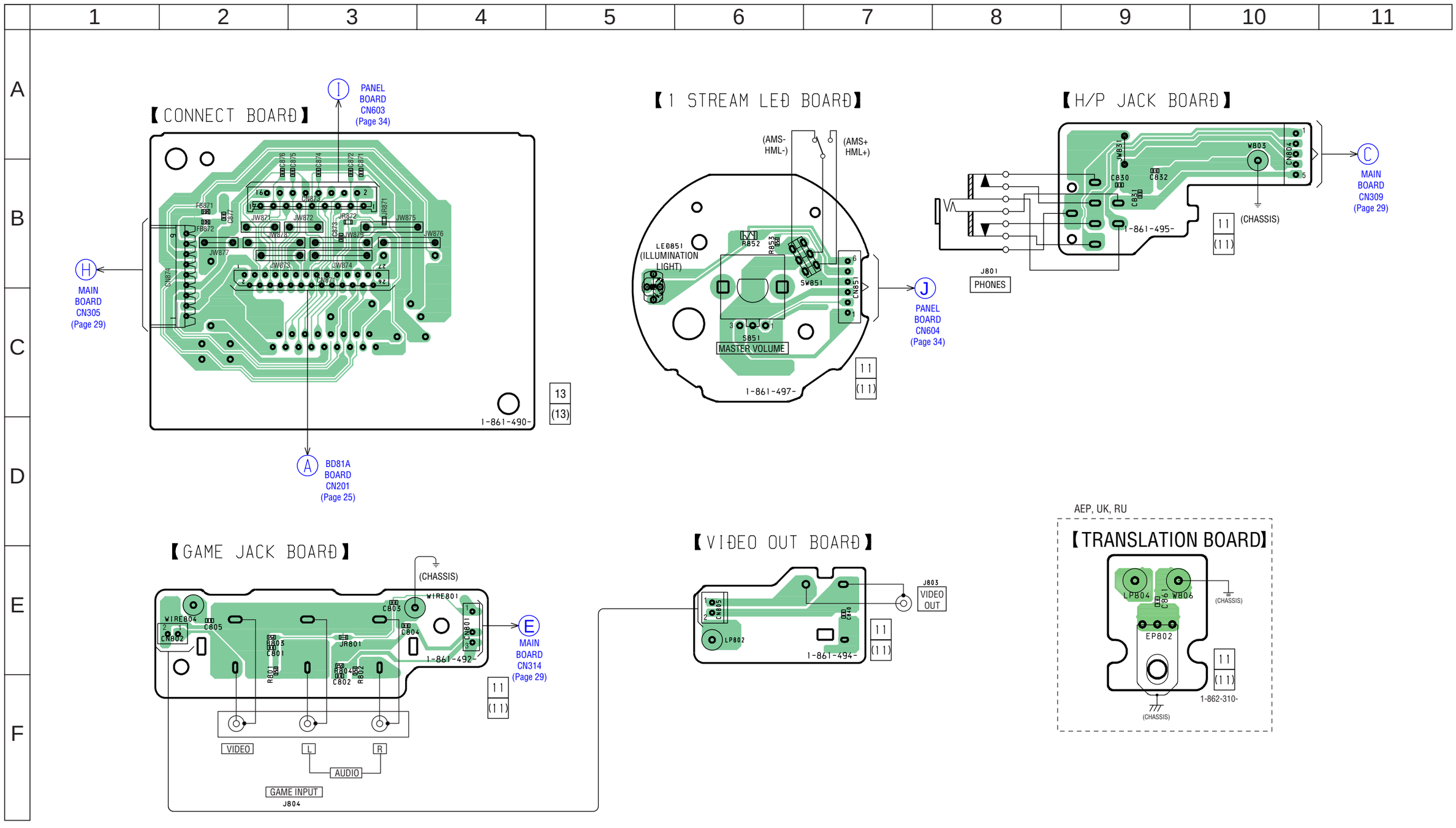
5-7. SCHEMATIC DIAGRAM – MAIN SECTION (1/2) –



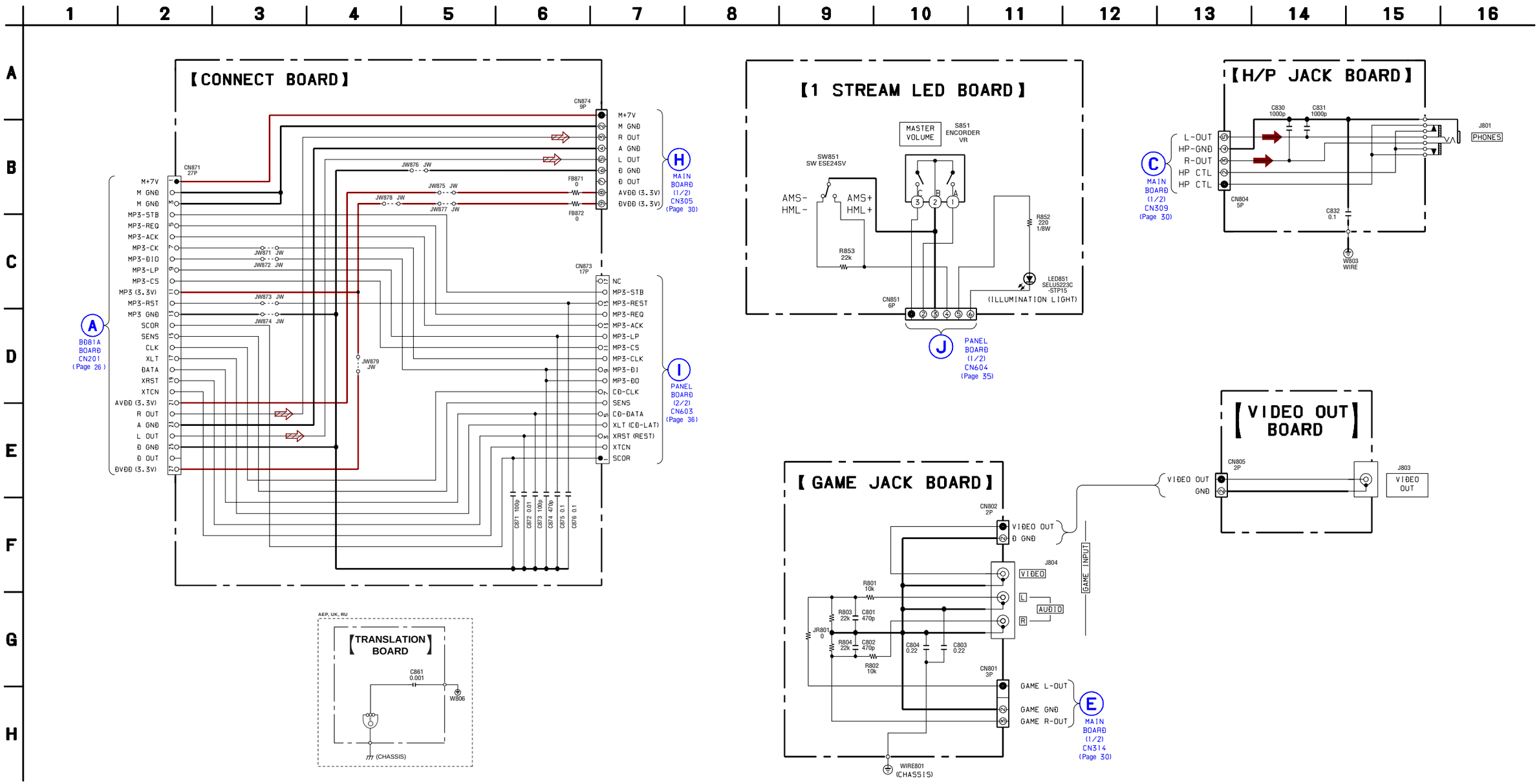
5-8. SCHEMATIC DIAGRAM – MAIN SECTION (2/2) –



5-9. PRINTED WIRING BOARD – PANEL COMB SECTION – • See page 21 for Circuit Boards Location. • : Uses unleaded solder.

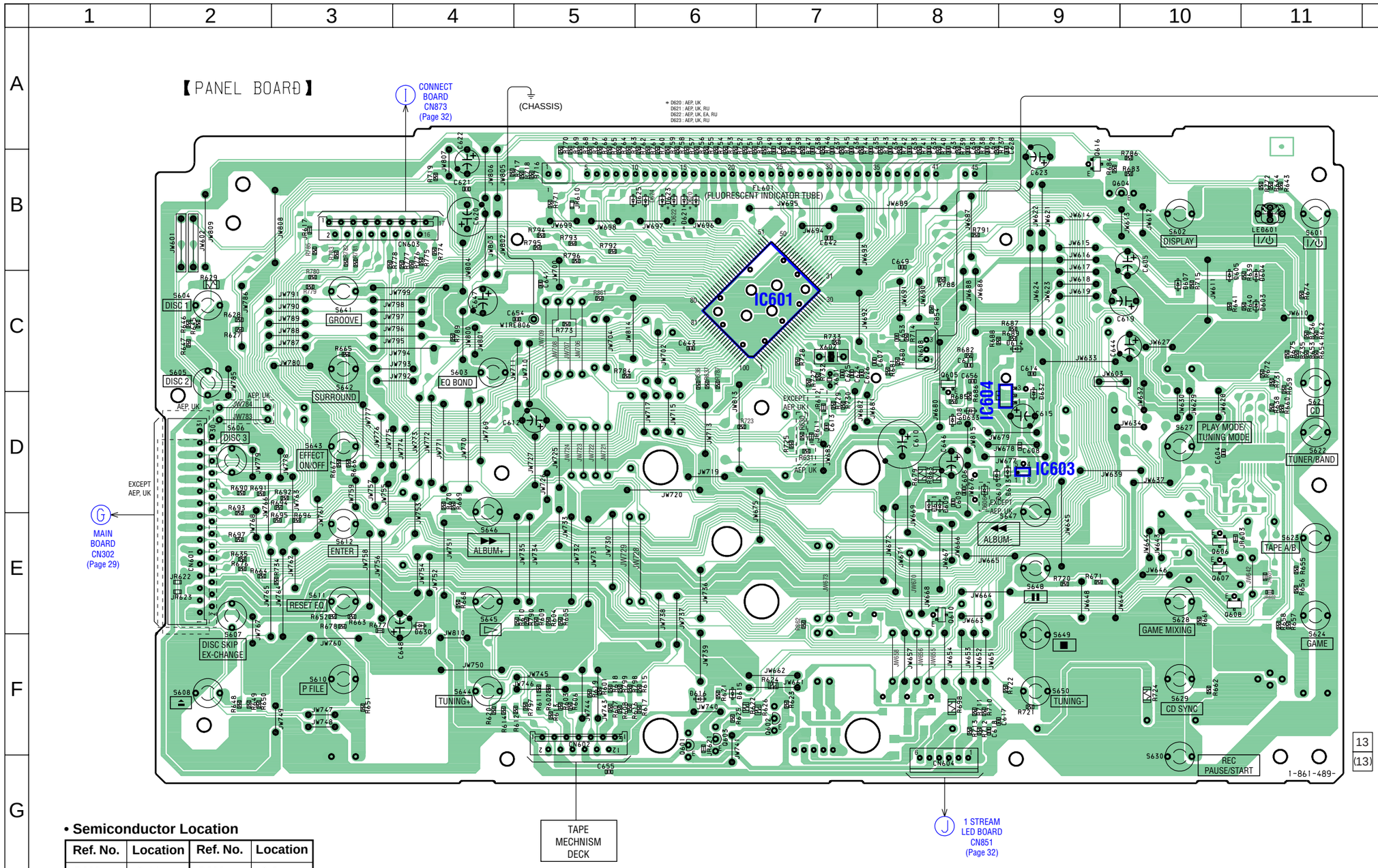


5-10. SCHEMATIC DIAGRAM – PANEL COMB SECTION –



5-11. PRINTED WIRING BOARD – PANEL SECTION –

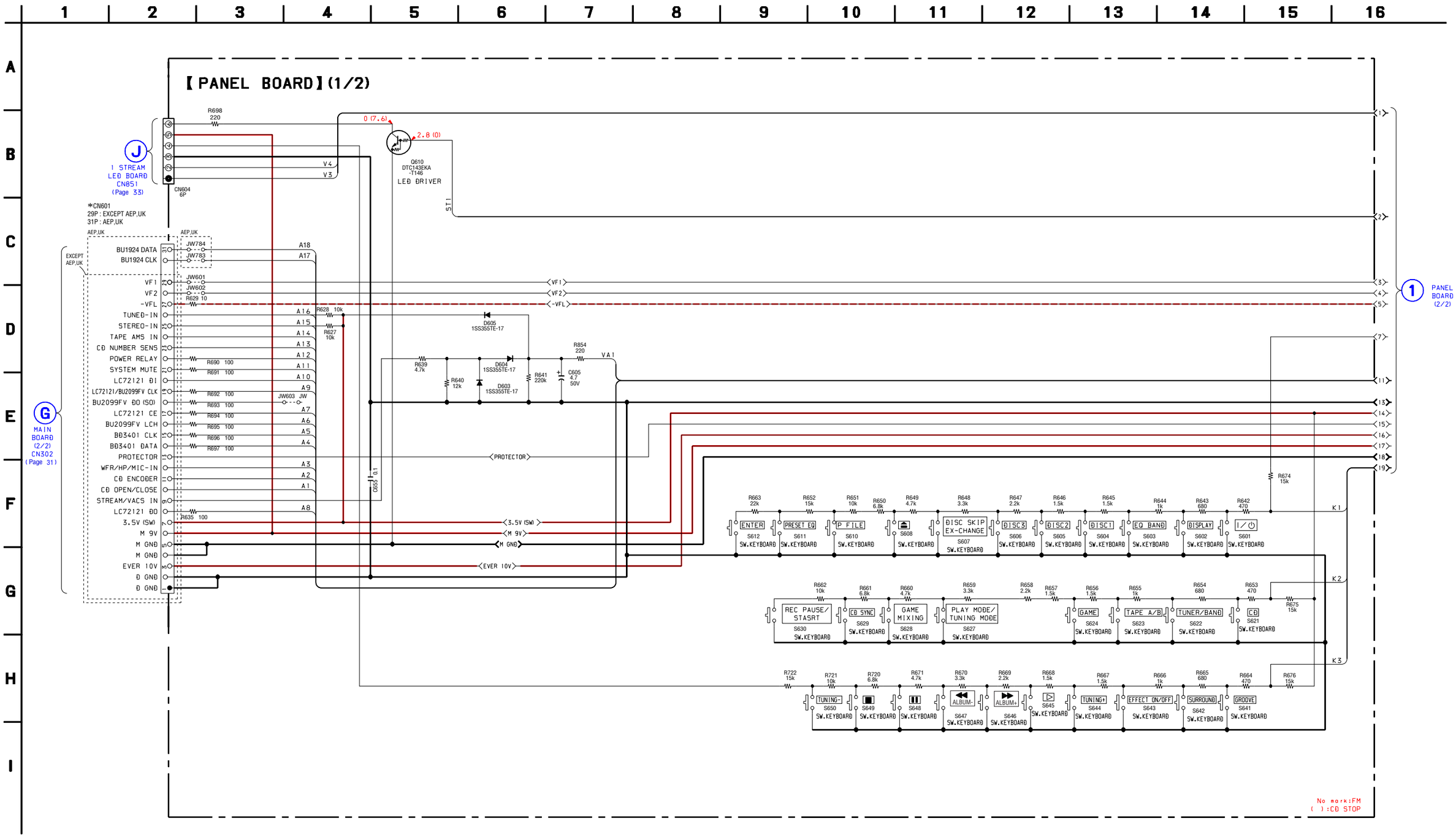
• See page 21 for Circuit Boards Location. • : Uses unleaded solder.



• **Semiconductor Location**

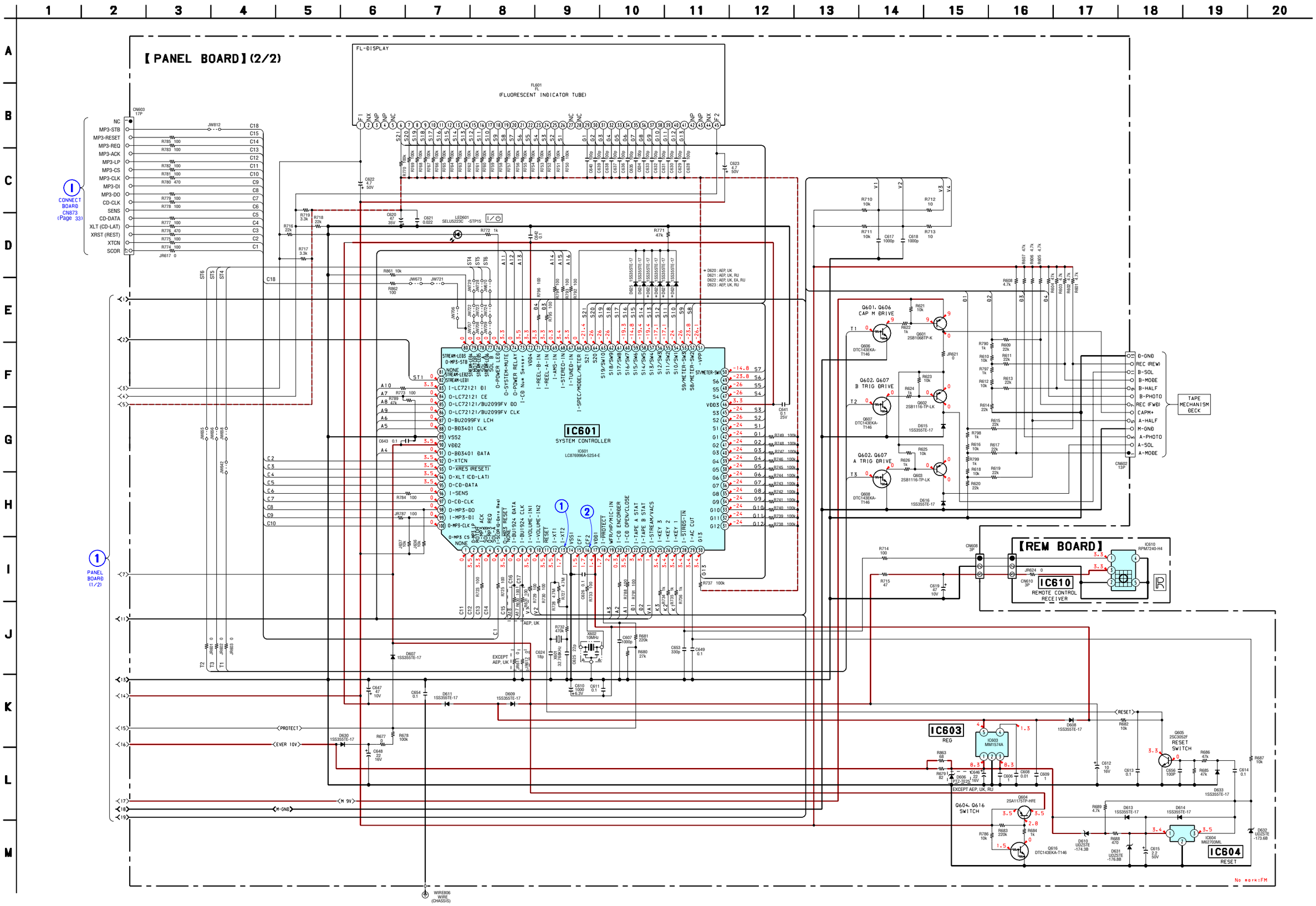
Ref. No.	Location	Ref. No.	Location
D603	C-11	D632	C-9
D604	C-11	D633	D-8
D605	C-10		
D606	D-8	IC601	C-7
D607	C-10	IC603	D-9
D608	D-8	IC604	C-8
D609	D-8	IC610	C-12
D610	D-8		
D611	D-8	LED601	B-11
D613	D-9		
D614	C-9	Q601	F-6
D615	F-6	Q602	F-7
D616	F-6	Q603	F-6
D620	B-6	Q604	B-9
D621	B-6	Q605	C-8
D622	B-6	Q606	E-10
D623	B-6	Q607	E-10
D624	B-6	Q608	E-10
D625	B-5	Q610	E-8
D630	E-4	Q616	A-9
D631	C-8		

5-12. SCHEMATIC DIAGRAM – PANEL SECTION (1/2) –

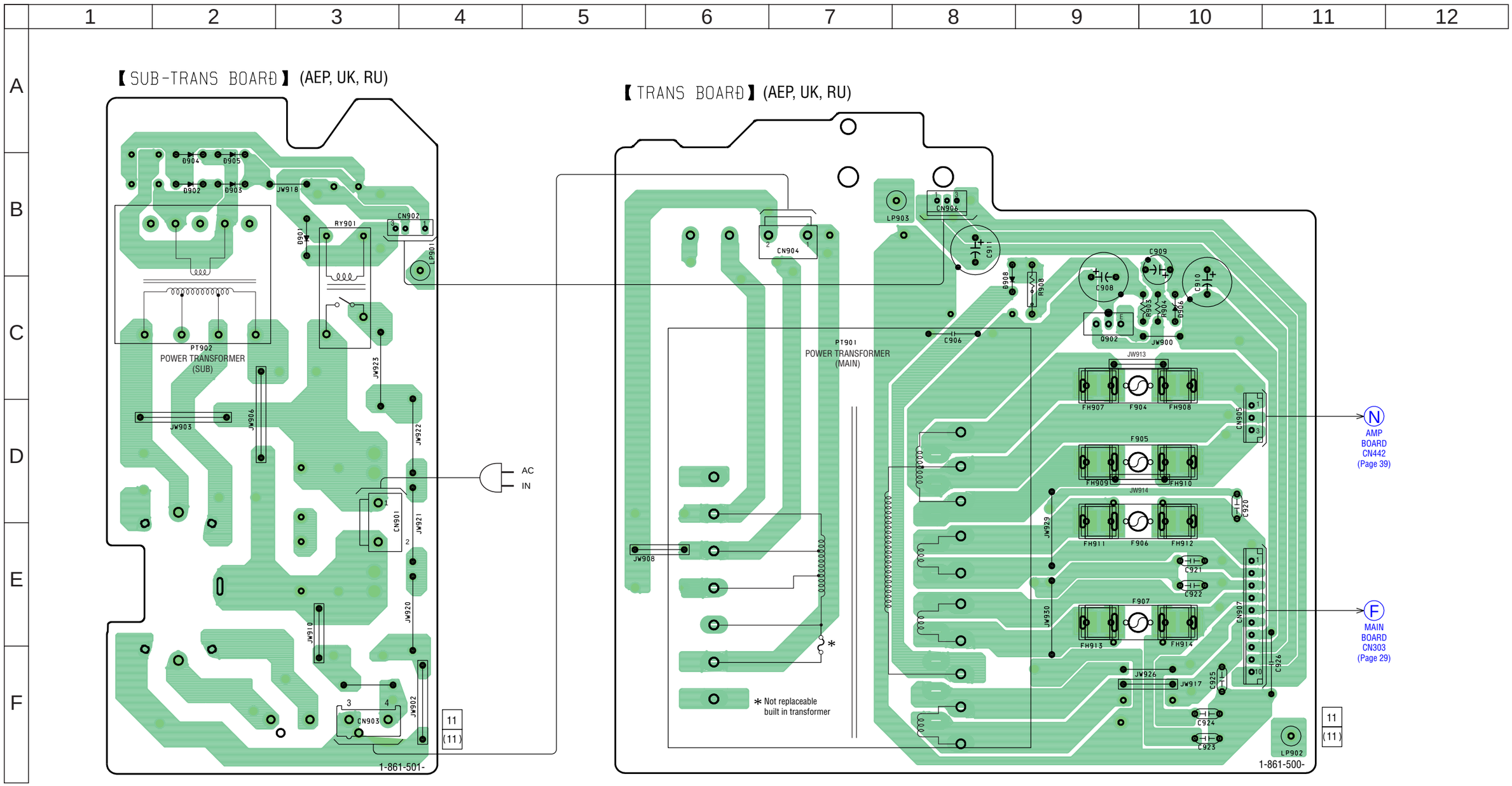


5-13. SCHEMATIC DIAGRAM – PANEL SECTION (2/2) –

• See page 47 for IC PIN FUNCTION DESCRIPTION.



5-14. PRINTED WIRING BOARD – TRANS SECTION (AEP, UK, RU) – • See page 21 for Circuit Boards Location. • : Uses unleaded solder.

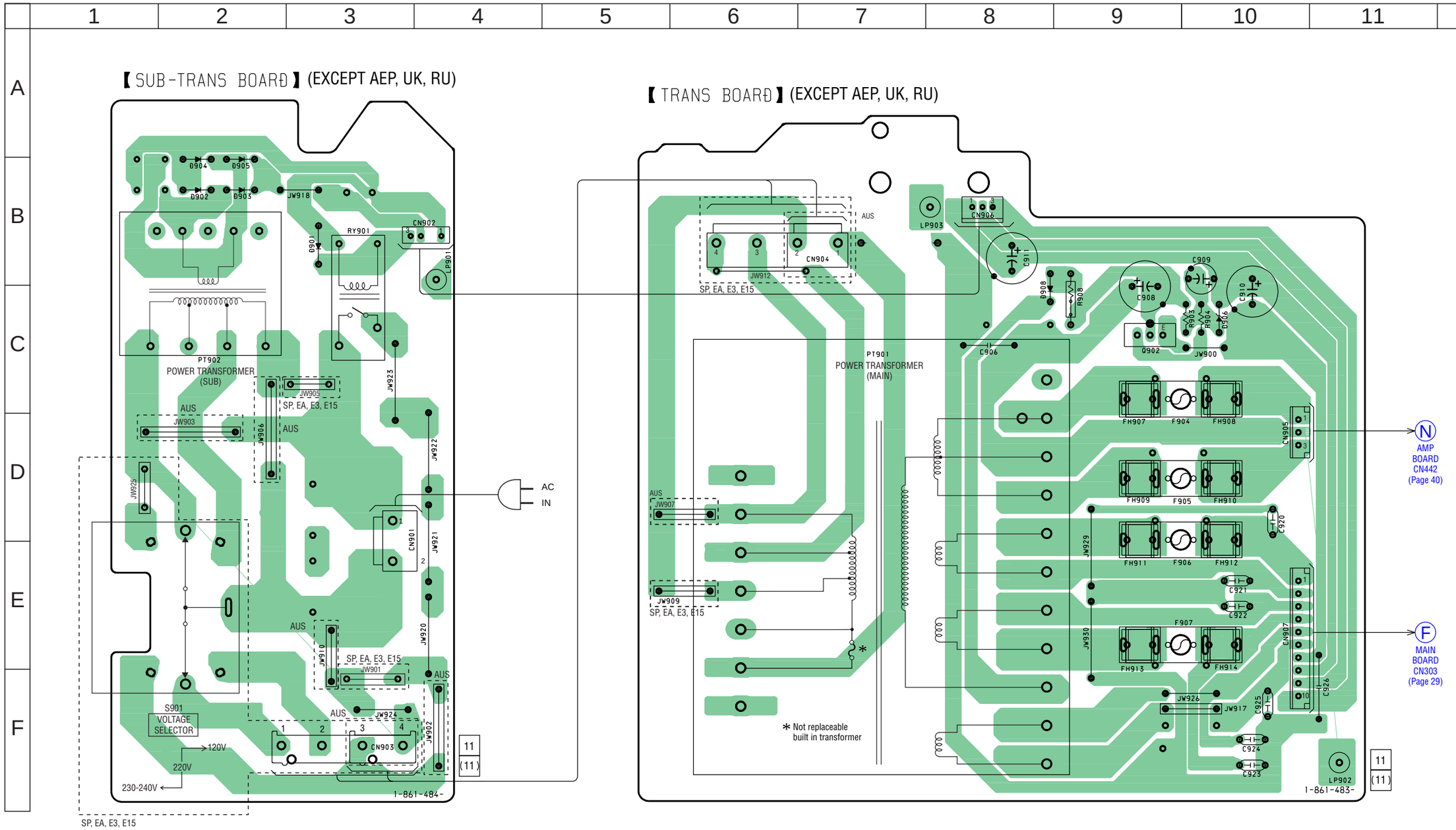


- **Semiconductor Location**

Ref. No.	Location
D901	B-3
D902	B-2
D903	B-2
D904	B-2
D905	B-2
D906	C-10
D908	C-8
Q902	C-9

5-15. PRINTED WIRING BOARD – TRANS SECTION (EXCEPT AEP, UK, RU) –

• See page 21 for Circuit Boards Location. • : Uses unleaded solder.

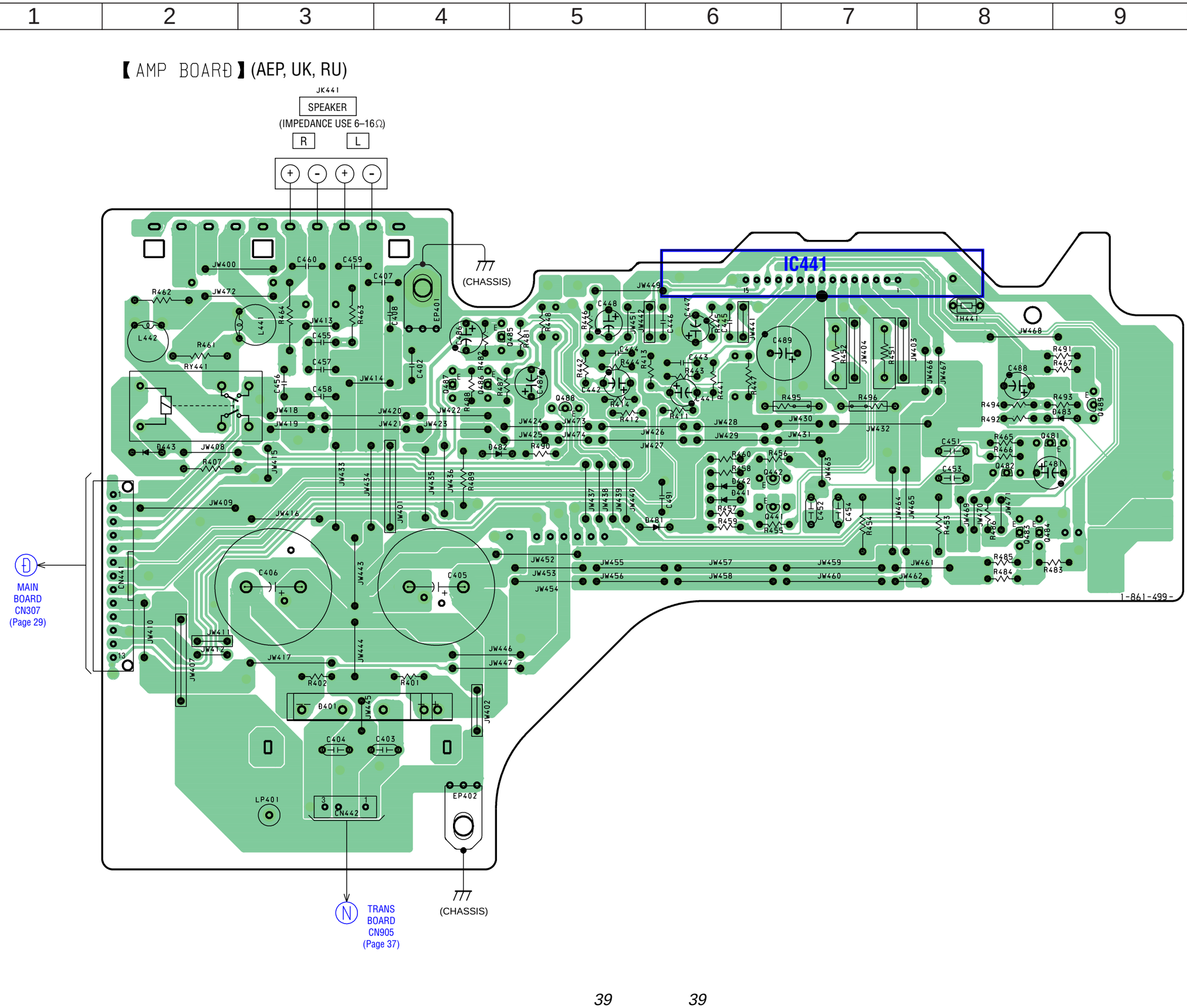


• **Semiconductor Location**

Ref. No.	Location
D901	B-3
D902	B-2
D903	B-2
D904	B-2
D905	B-2
D906	C-10
D908	C-8
Q902	C-9

5-16. PRINTED WIRING DIAGRAM – AMP SECTION (AEP, UK, RU) – • See page 21 for Circuit Boards Location. • : Uses unleaded solder.

【 AMP BOARD 】(AEP, UK, RU)



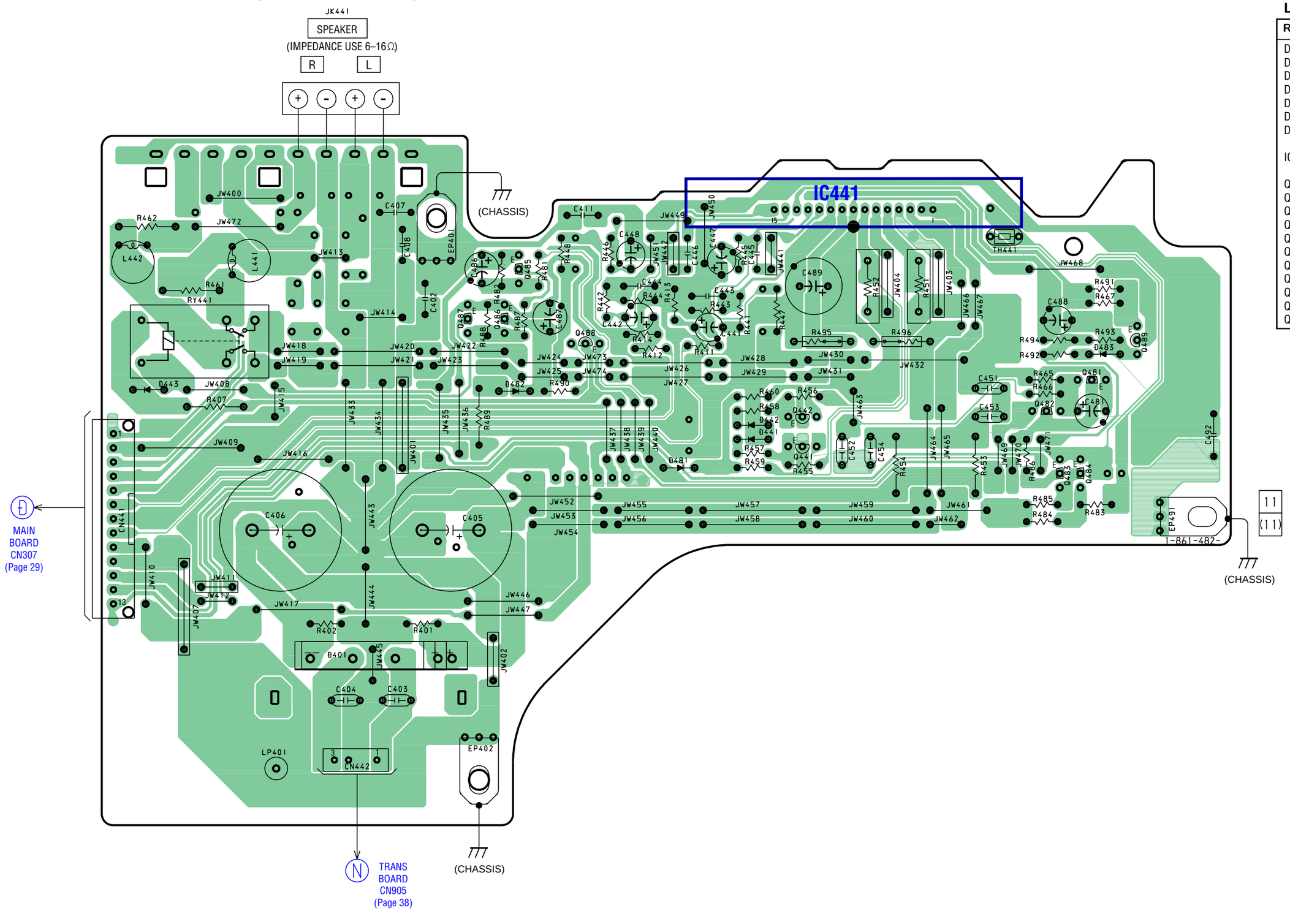
• **Semiconductor Location**

Ref. No.	Location
D401	F-3
D441	D-6
D442	D-6
D443	D-2
D481	D-6
D482	D-4
D483	C-9
IC441	B-7
Q441	D-6
Q442	D-6
Q481	D-9
Q482	D-8
Q483	D-8
Q484	D-8
Q485	C-4
Q486	C-4
Q487	C-4
Q488	C-5
Q489	C-9

11
(11)

5-17. PRINTED WIRING DIAGRAM – AMP SECTION (EXCEPT AEP, UK, RU) – • See page 21 for Circuit Boards Location. • : Uses unleaded solder.

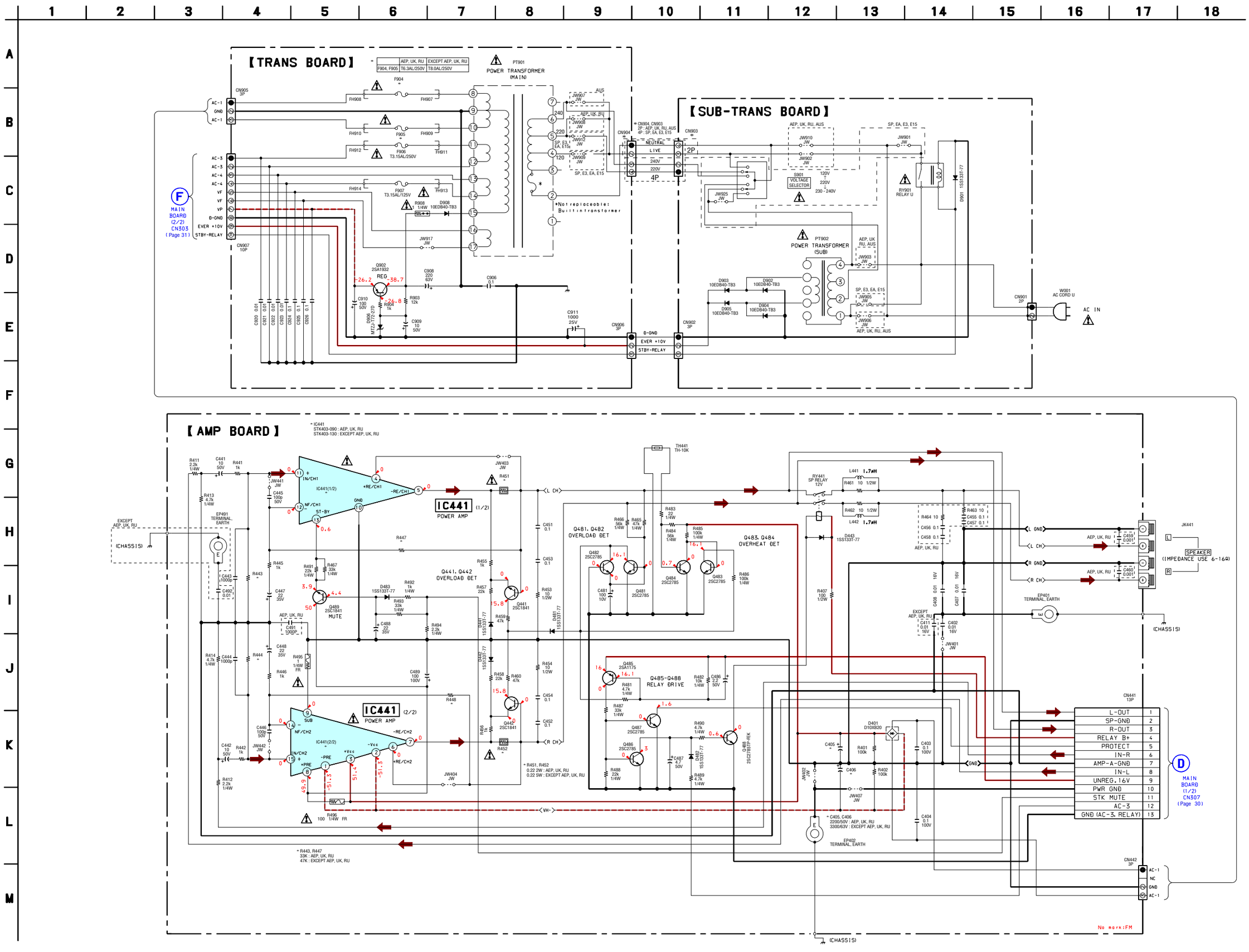
【 AMP BOARD 】(EXCEPT AEP, UK, RU)



• **Semiconductor Location**

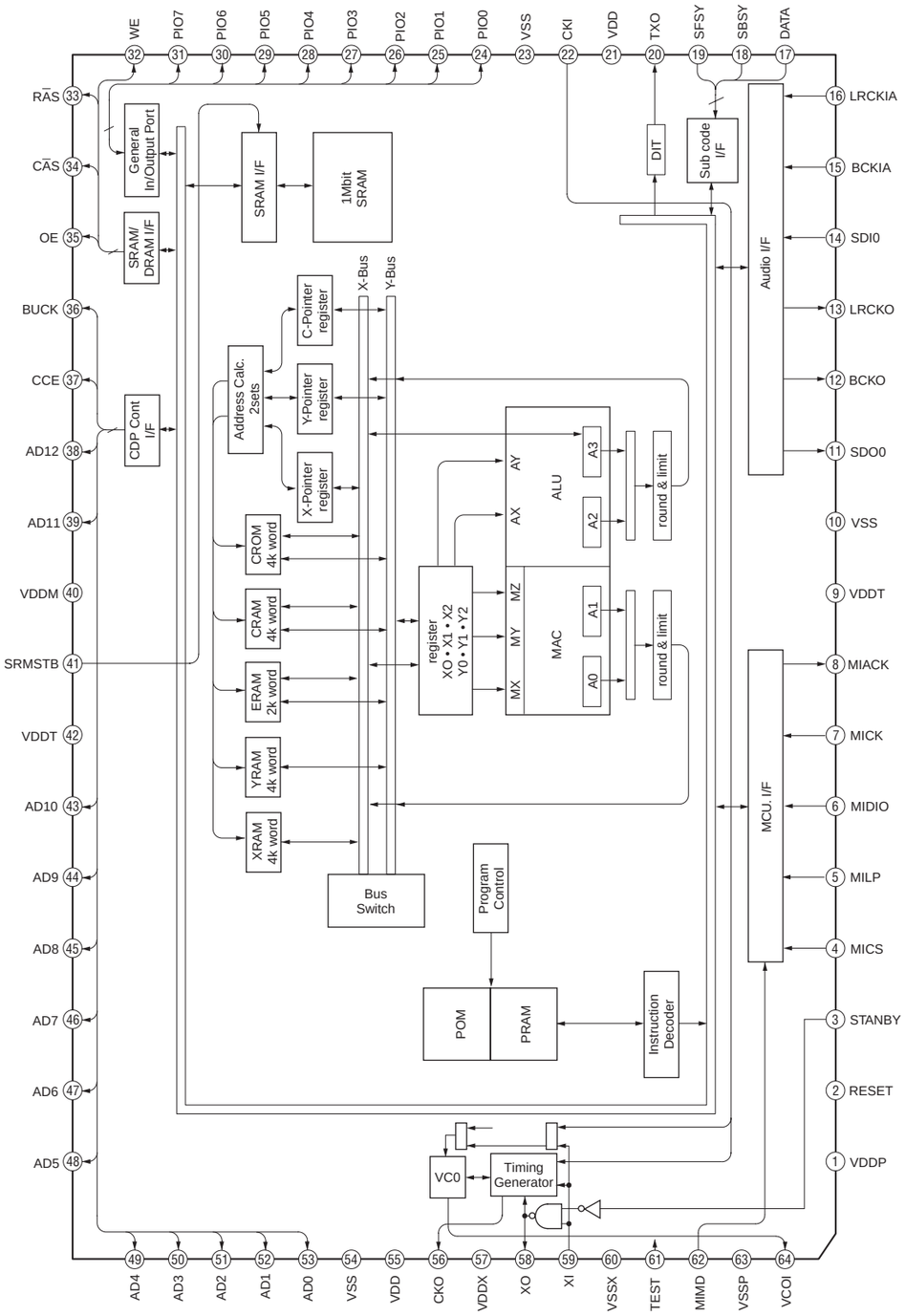
Ref. No.	Location
D401	F-3
D441	D-6
D442	D-6
D443	D-2
D481	D-6
D482	D-4
D483	C-9
IC441	B-7
Q441	D-6
Q442	D-6
Q481	D-9
Q482	D-8
Q483	D-8
Q484	D-8
Q485	C-4
Q486	C-4
Q487	C-4
Q488	C-5
Q489	C-9

5-18. SCHEMATIC DIAGRAM – AMP POWER SECTION –

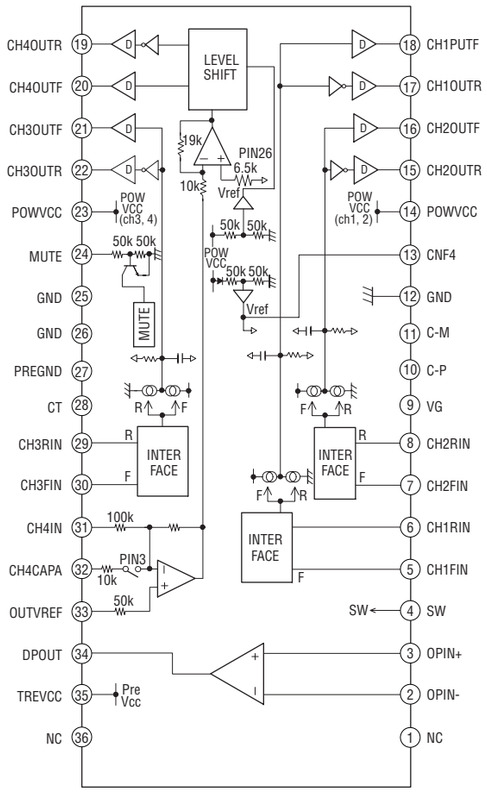


• IC BLOCK DIAGRAMS

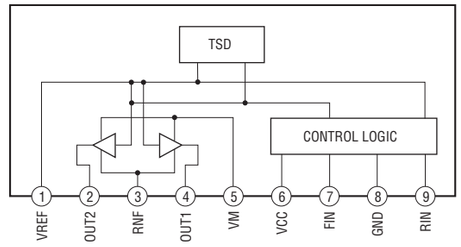
IC301 TC94A34FG-002 (BD81A BOARD)



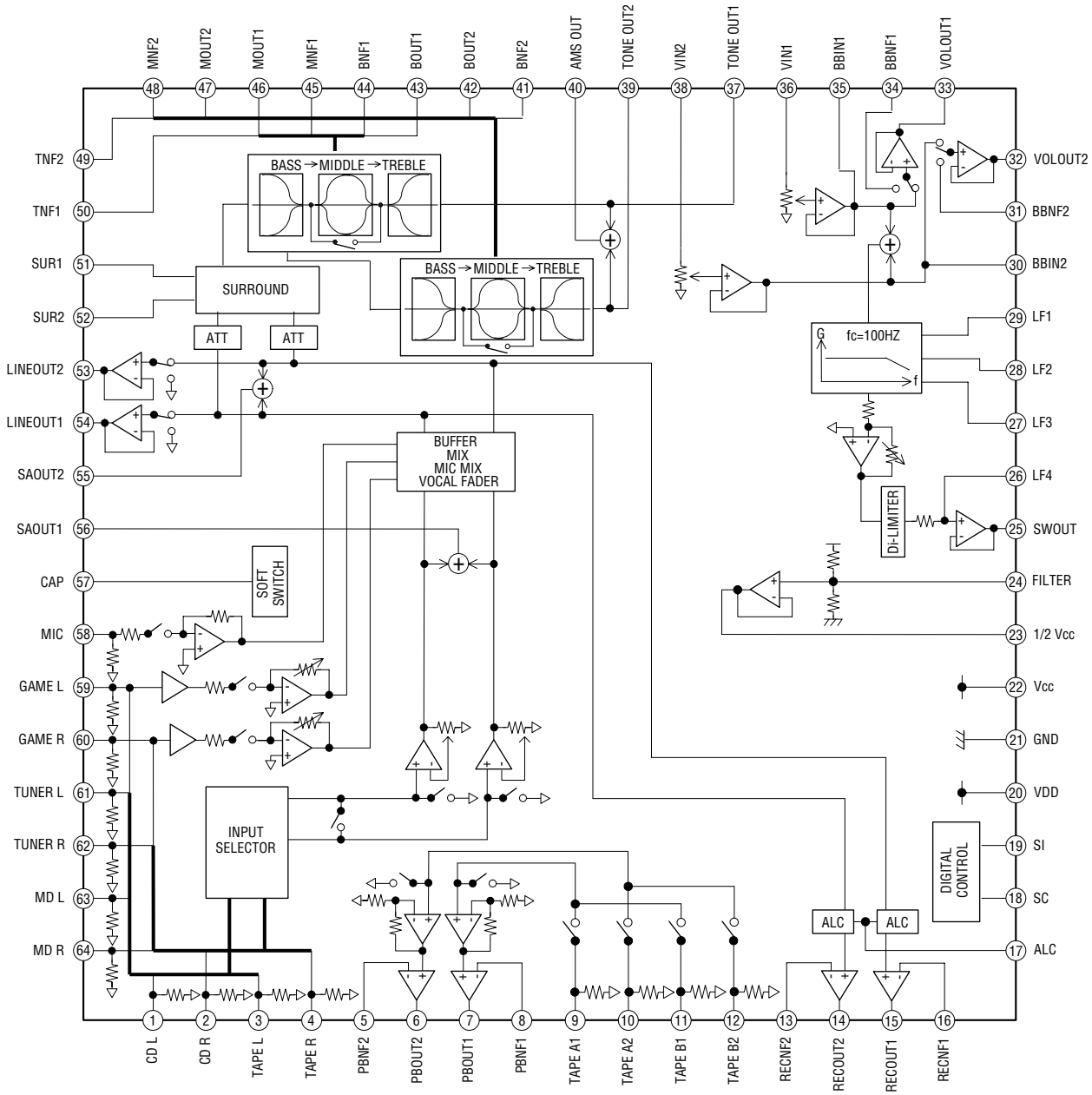
IC251 BA5947FM (BD81A BOARD)



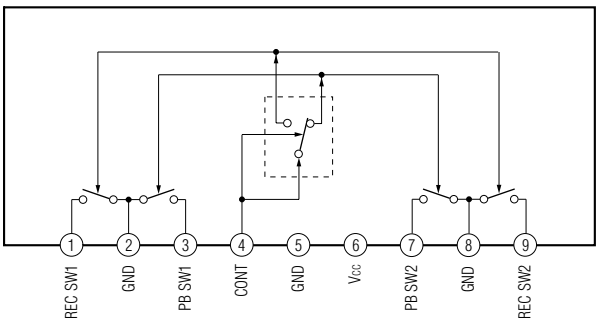
IC701, 712 BA6956AN (DRIVER BOARD)



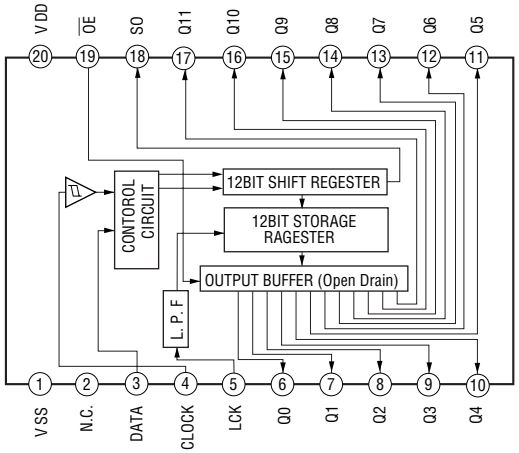
IC101 BD3401KS2 (MAIN BOARD)



IC201 BA3126N (MAIN BOARD)



IC371 BU2099FV (MAIN BOARD)



5-19. IC PIN FUNCTION DESCRIPTION

• IC101 CXD3059AR (RF AMP) (BD81A BOARD)

Pin No	Pin Name	I/O	Description
1	MIRR	I/O	Mirror signal input/output (Not used)
2	DFCT	I/O	Defect signal input/output (Not used)
3	FOK	I/O	Focus OK signal input/output (Not used)
4	VSS	—	Internal digital ground
5	LOCK	I/O	GFS is sampled at 460Hz; when GFS is high , this pin outputs a high signal If GFS is low eight consecutive
6	MDP	O	Spindle motor servo control output
7	SSTP	I	Disk innermost detection signal input
8	IOVSS1	—	I/O digital ground
9	SFDR	O	Sled drive output
10	SRDR	O	Sled drive output
11	TFDR	O	Tracking drive output
12	TRDR	O	Tracking drive output
13	FFDR	O	Focus drive output
14	FRDR	O	Focus drive output
15	IOVDD1	—	I/O digital power supply
16	AVDD0	—	Analog power supply
17	AVSS0	—	Analog ground
18	NC	—	Not used
19	E	I	E signal input
20	F	I	F signal input
21	TEI	I	Tracking error signal input to DSSP block
22	TEO	O	Tracking error signal output from RF amplifier block
23	FEI	I	Focus error signal input to DSSP block
24	FEO	O	Focus error signal output from RF amplifier block
25	VC	I/O	Center voltage output from RF amplifier block
26	A	I	A signal input
27	B	I	B signal input
28	C	I	C signal input
29	D	I	D signal input
30	NC	—	Not used
31	AVDD4	—	Analog power supply
32	RFDCO	O	RFDC signal output (Not used)
33	PDSENS	I	Reference voltage pin for PD
34	AC_SUM	O	RFAC summing amplifier output
35	EQ_IN	I	Equalizer circuit input
36	LD	O	APC amplifier output
37	PD	I	APC amplifier input
38	NC	—	Not used
39	RFC	I	Equalizer cut-off frequency adjustment pin
40	AVSS4	—	Analog ground
41	RFACO	O	RFAC signal output
42	RFACI	I	RFAC signal input or EFM signal input
43	AVDD3	—	Analog power supply
44	BIAS	I	Asymmetry circuit constant current input
45	ASYI	I	Asymmetry comparator voltage input
46	ASYO	O	EFM full-swing output (Low = VSS, High = VDD)
47	VPCO	O	Wide-band EFM PLL charge pump output
48	VCTL	I	Wide-band EFM PLL VCO2 control voltage input
49	AVSS3	—	Analog ground

Pin No.	Pin Name	I/O	Description
50	CLTV	I	Multiplier VCO1 control voltage input
51	FILO	O	Master PLL (slave = digital PLL) filter output
52	FILI	I	Master PLL filter input
53	PCO	O	Master PLL charge pump output
54	AVDD5	—	Analog power supply
55	DDVROUT	O	DC/DC converter output
56	DDVRSEN	I	DC/DC converter output voltage monitor pin
57	AVSS5	—	Analog ground
58	DDCR	I	DC/DC converter reset pin
59	NC	—	Not used
60	BCKI	I	D/A interface bit clock input
61	PCMDI	I	D/A interface serial data input (2's COMP, MSB first)
62	LRCKl	I	D/A interface LR clock input
63	LRCK	O	D/A interface LR clock output f = Fs
64	VSS	—	Internal digital ground
65	PCMD	O	D/A interface serial data output (2's COMP, MSB first)
66	BCK	O	D/A interface bit clock output
67	VDD	—	Internal digital power supply
68	EMPH	O	High when the playback disc has emphasis, low it has not
69	EMPHI	I	High when de-emphasis is ON, low when input OFF
70	IOVDD2	—	I/O digital power supply
71	DOUT	O	Digital Out output
72	TEST	I	Test pin Normally ground
73	TES1	I	Test pin Normally ground
74	IOVss2	—	I/O digital ground
75	NC	—	Not used
76	XVSS	—	Master clock ground
77	XTAO	O	Crystal oscillation circuit output
78	XTAI	I	Crystal oscillation circuit input
79	XVDD	—	Master clock power supply
80	AVDD1	—	Analog power supply
81	AOUT1	O	Lch analog output
82	VREFL	O	Lch reference voltage
83	AVSS1	—	Analog ground
84	AVSS2	—	Analog ground
85	VREFR	O	Rch reference voltage
86	AOUT2	O	Rch analog output
87	AVDD2	—	Analog power supply
88	NC	—	Not used
89	IOVDD0	—	I/O digital power supply
90	RMUT	O	Rch "0" detection flag (Not used)
91	LMUT	O	Lch "0" detection flag (Not used)
92	NC	—	Not used
93	XTSL	I	Crystal selection input (Not used)
94	IOVSS0	—	I/O digital ground
95	XTACN	I	Oscillation circuit control Self-oscillation when high, oscillation stop when low
96	SQSO	O	Subcode Q 80-bit and PCM peak and level data output CD TEXT data output
97	SQCK	I	SQSO readout clock input

Pin No.	Pin Name	I/O	Description
98	SBSO	O	Subcode P to W serial output
99	EXCK	I	SBSO readout clock input
100	XRST	I	System reset Reset when low
101	SYSM	I	Mute input Muted when high
102	D ATA	I	Serial data input from CPU
103	VSS	—	Internal digital ground
104	XLAT	I	Latch input from CPU The serial data is latched at the falling edge
105	CLOCK	I	Serial data transfer clock input from CPU
106	VDD	—	Internal digital power supply
107	SENS	O	SENS output to CPU
108	SCLK	I	SENS serial data readout clock input
109	ATSK	I/O	Anti-shock input/output
110	WFCK	O	WFCK output (Not used)
111	XUGF	O	XUGF output (Not used)
112	XPCK	O	XPCK output (Not used)
113	GFS	O	GFS output (Not used)
114	C2PO	O	C2PO output (Not used)
115	SCOR	O	High output when the subcode sync, S0 or S1, is detected
116	VDD	—	Internal digital power supply
117	C4M	O	4 2336MHz output (Not used)
118	WDCK	O	Word clock output f = 2Fs (Not used)
119	COUT	I/O	Track number count signal input/output (Not used)
120	NC	—	Not used

• IC601 LC876996A-52S4-E (SYSTEM CONTROLLER) (PANEL BOARD)

Pin No	Pin Name	I/O	Description
1	O-MP3 CS	O	CS output to CD Digital Processor(Not used)
2	O-MP3 LP MOTER	O	Motor signal output
3	I-MP3 ACK SOL-B	I	Motor signal input
4	O-MP3 REQ SOL-A	O	Motor signal output
5	I-SCOR	I	CD Scor input
6	$\overline{\text{O-MP3 RESET}}$	O	RESET output to CD Digital Processor
7	I-BU1924 DATA	I	Data input(Not used)
8	I-BU1924 CLK	I	Clock input(Not used)
9	I-VOLUME-IN1	I	Volume signal input from the encoder
10	I-VOLUME-IN2	I	Volume signal input from the encoder
11	$\overline{\text{RESET}}$	I	Reset input
12	I-XT1	I	Connection for input a crystal resonator
13	I-XT2	O	Connection for input a crystal resonator
14	VSS1	—	Ground
15	CF1	I	Connection for input a ceramic resonator
16	CF2	O	Connection for input a ceramic resonator
17	VDD1	—	Power supply
18	$\overline{\text{I-PROTECT}}$	I	Power amplifier circuit protection signal input
19	WFR/HP/MIC-IN	I	SubWoofer or Headphone detection signal input
20	I-CD ENCODER	I	Signal input from the CD encoder
21	I-CD OPEN/CLOSE	I	CD tray open switch signal input
22	I-TAPE A START	I	TAPE A switches signal input
23	I-TAPE B START	I	TAPE B switches signal input
24	I-STREAM/VACS	I	Stream/Vacs signal input
25	I-KEY 3	I	Function key input
26	I-KEY 2	I	Function key input
27	I-KEY 1	I	Function key input
28	$\overline{\text{I-SIRDS-IN}}$	I	Data input from the remote contorol receiver
29	I-AC CUT	I	Power down signal input
30	G13	O	FL tube grid signal output
31	G12	O	FL tube grid signal output
32	G11	O	FL tube grid signal output
33	G10	O	FL tube grid signal output
34	G9	O	FL tube grid signal output
35	G8	O	FL tube grid signal output
36	G7	O	FL tube grid signal output
37	G6	O	FL tube grid signal output
38	G5	O	FL tube grid signal output
39	G4	O	FL tube grid signal output
40	G3	O	FL tube grid signal output
41	G2	O	FL tube grid signal output
42	G1	O	FL tube grid signal output
43	S1	O	FL tube segment signal output
44	S2	O	FL tube segment signal output
45	S3	O	FL tube segment signal output
46	VDD3	—	Power supply
47	S4	O	FL tube segment signal output
48	S5	O	FL tube segment signal output
49	S6	O	FL tube segment signal output
50	S7/METER-SW1	O	FL tube segment signal output

Pin No	Pin Name	I/O	Description
51	-VPP	—	Power supply (-)
52	S8/METER-SW2	O	FL tube segment signal output
53	S9/METER-SW3	O	FL tube segment signal output
54	S10/SW1	O	FL tube segment signal output
55	S11/SW2	O	FL tube segment signal output
56	S12/SW3	O	FL tube segment signal output
57	S13/SW4	O	FL tube segment signal output
58	S14/SW5	O	FL tube segment signal output
59	S15/SW6	O	FL tube segment signal output
60	S16/SW7	O	FL tube segment signal output
61	S17/SW8	O	FL tube segment signal output
62	S18/SW9	O	FL tube segment signal output
63	S19/SW10	O	FL tube segment signal output
64	S20	O	FL tube segment signal output
65	S21	O	FL tube segment signal output
66	I-SPEC/MODE/METER	I	METER swich input
67	I-TUNED-IN	I	Tuning a frequency signal input
68	I-STEREO-IN	I	Stereo tuning signal input
69	I-ASM-IN	I	ASM signal input
70	I-REEL-A-IN	I	A deck photo sensor signal input
71	I-REEL-B-IN	I	B deck photo sensor signal input
72	VDD4	—	Power supply
73	I-CD Num Senser	O	Table address sensor swich signal input
74	O-POWER-RELAY	O	POWER RELAY control output
75	O-SYSTEM-MUTE	O	System muting signal output
76	O-POWER-LED	O	POWER LED control signal output
77	STREAM-LED6 SOLB	O	Illumination LED control signal output(Not used)
78	STREAM-LED5 SOLA	O	Illumination LED control signal output(Not used)
79	STREAM-LED4 MOTOR	O	Illumination LED control signal output(Not used)
80	STREAM-LED3 MP3-STB	O	Illumination LED control signal output(Not used)
81	STREAM-LED2	O	Illumination LED control signal output(Not used)
82	STREAM-LED1	O	Illumination LED control signal output(Not used)
83	I-LC72121 DI	I	Data input from Tuner
84	O-LC72121 CE	O	Chip select output to Tuner
85	O-LC72121/BU2099FV DO	O	Data input from Tuner and SP Driver
86	O-LC72121/BU2099FV CLK	O	Clock output to Tuner and SP Driver
87	O-BU2099FV LCH	O	LCH output to SP Driver
88	O-BD3401 CLK	O	Clock output to Sound Processor
89	VSS2	—	Ground
90	VDD2	—	Power supply
91	O-BD3401 DATA	O	Data output toSound Processor
92	O-XTCN	O	CD xtcn signal output
93	$\overline{\text{O-XRES(RESET)}}$	O	CD reset signal output
94	O-XLT(CD-LAT)	O	CD xlt signal output
95	O-CD-DATA	O	CD data output
96	I-SENS	I	CD sens input
97	O-CD-CLK	O	CD clk output
98	O-MP3-DO	O	Clock output to CD Digital Processor(Not used)
99	I-MP3-DI	I	Data input from CD Digital Processor(Not used)
100	O-MP3-CLK	O	Clock output to CD Digital Processor(Not used)

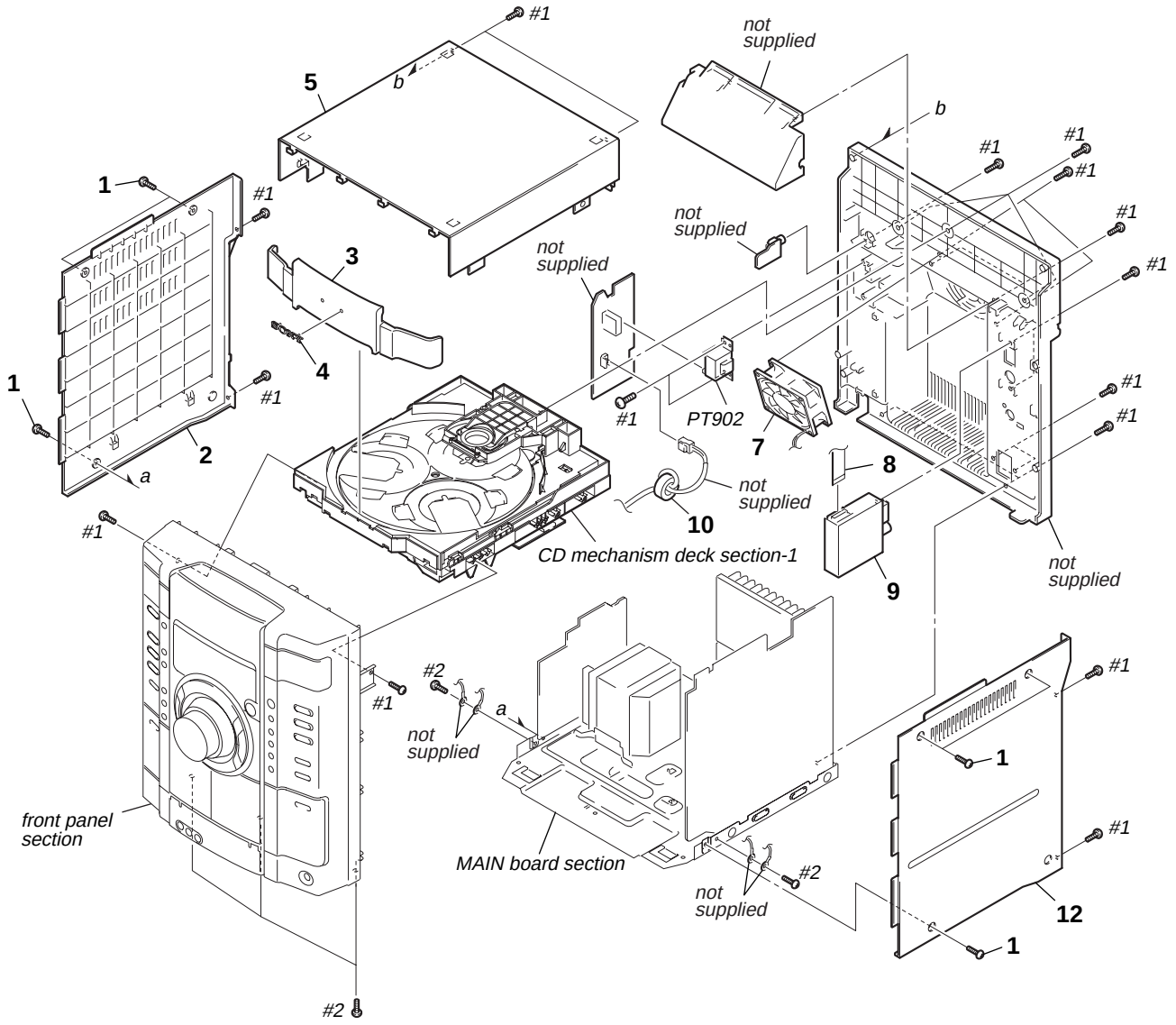
SECTION 6
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  AUS : Australian model
  E3 : 240V AC Area in E model
  E15 : Iran model
  EA : Saudi Arabia model
  RU : Russian model
  SP : Singapore model

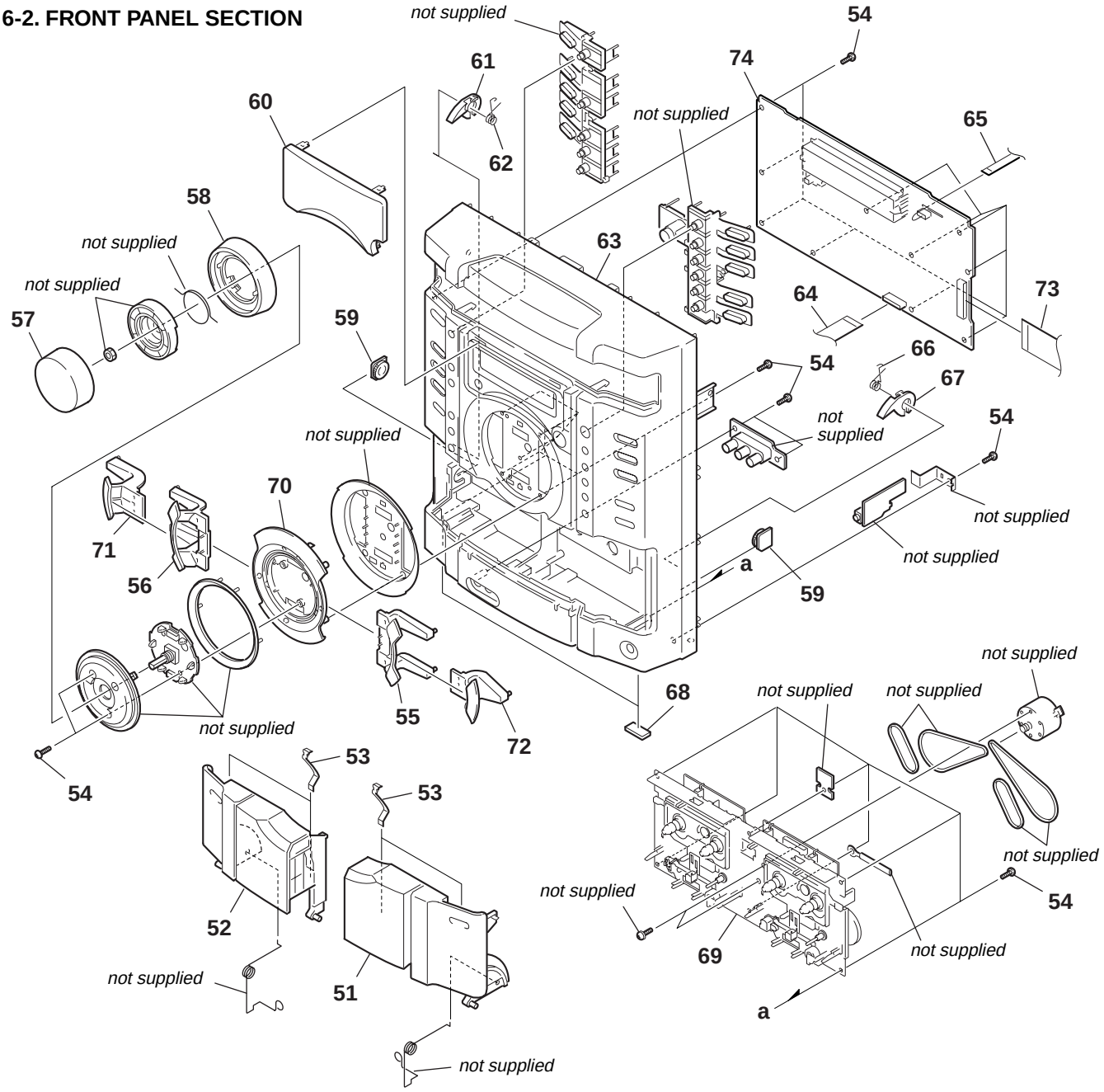
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

6-1. MAIN SECTION



Ref. No.	Part No.	Description	Remarks
1	3-363-099-32	SCREW (CASE 3 TP2)	
2	4-245-183-71	CASE (SIDE-L)	
3	4-252-196-11	DOOR, CD	
4	3-038-018-01	EMBLEM, SONY	
5	4-244-849-71	CASE (TOP)	
7	1-763-117-13	FAN, DC (SP, EA, E3, E15, AUS)	
8	1-769-940-11	WIRE (FLAT TYPE) (11 CORE) (SP, EA, E3, E15, AUS)	
8	1-777-353-11	WIRE (FLAT TYPE) (15 CORE) (AEP, UK, RU)	
9	1-693-615-11	TUNER (FM/AM) (SP, EA, E3, E15, AUS)	
9	1-693-616-11	TUNER (FM/AM) (AEP, UK)	
9	1-693-654-11	TUNER (FM/AM) (RU)	
10	1-400-285-11	F-BEAD, E2515MRT (EXCEPT E15)	
12	4-245-184-71	CASE (SIDE-R)	
⚠PT902	X-4956-293-1	SUB TRANS ASSY (AEP, UK, RU)	
⚠PT902	X-4956-294-1	SUB TRANS ASSY (AUS)	
⚠PT902	X-4956-322-1	SUB TRANS ASSY (EA)	
⚠PT902	X-4956-294-1	SUB TRANS ASSY (SP, E3, E15)	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

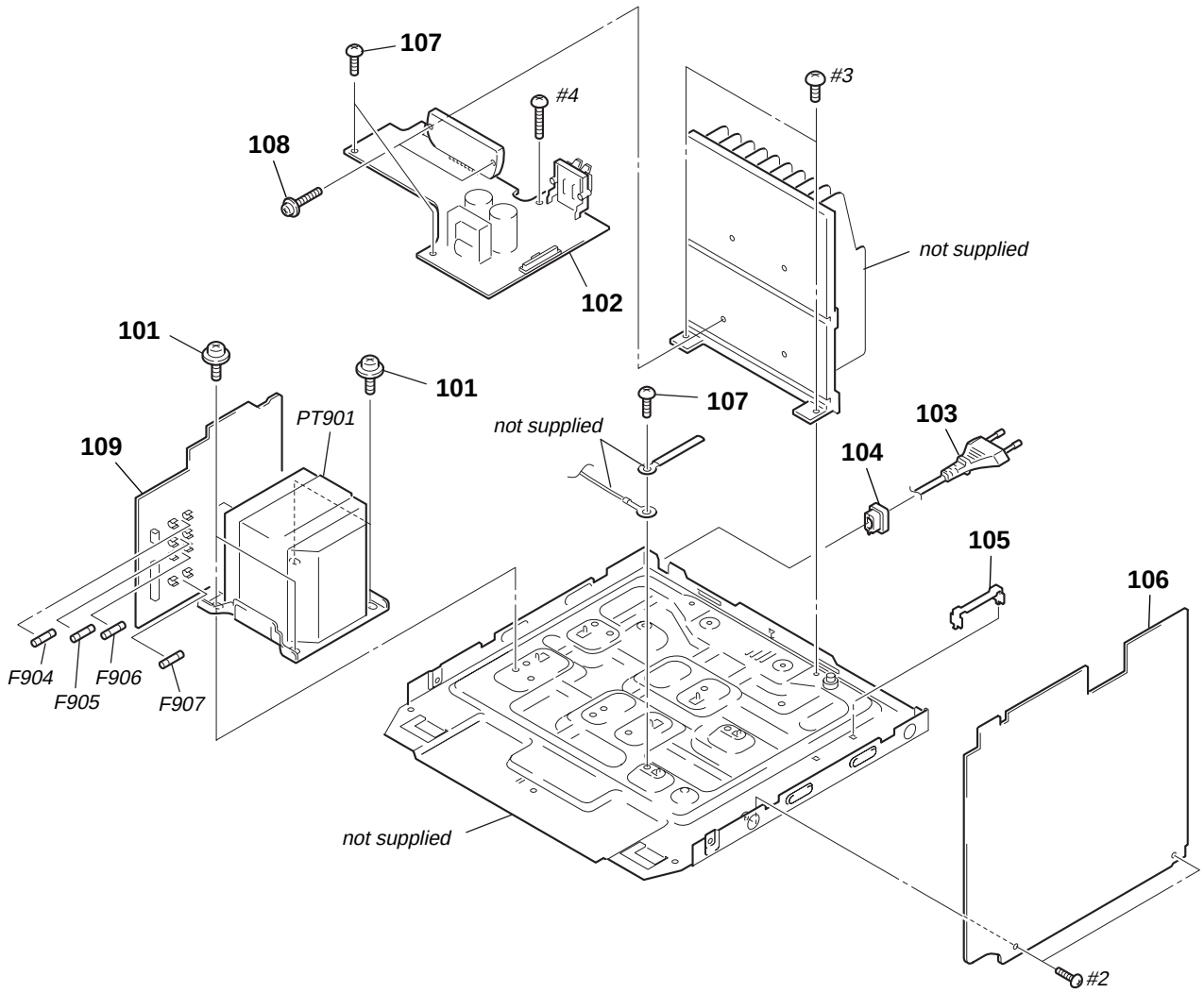
6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
51	4-252-202-01	DOOR (B), CASS	
52	4-252-201-01	DOOR (A), CASS	
53	4-238-631-01	TAPE SPRING	
54	4-951-620-01	SCREW (2.6X8), +BVTP	
55	4-252-207-11	BUTTON, FF/ALBUM	
56	4-252-208-11	BUTTON, FR/ALBUM	
57	4-252-214-01	KNOB, VOLUME	
58	X-4956-295-1	RING ASSY, KNOB	
59	4-224-104-41	DAMPER	
60	4-252-198-01	WINDOW, DISPLAY (EXCEPT AEP, UK)	
60	4-252-198-11	WINDOW, DISPLAY (AEP, UK)	
61	4-231-824-01	CAM (A), HEART	
62	4-231-836-01	SPRING (HEART CAM-A)	
63	4-252-195-11	PANEL, FRONT	
64	1-769-975-11	WIRE (FLAT TYPE) (13 CORE)	

Ref. No.	Part No.	Description	Remarks
65	1-769-883-11	WIRE (FLAT TYPE) (7 CORE)	
66	4-231-841-01	SPRING (HEART CAM-B)	
67	4-231-825-01	CAM (B), HEART	
68	4-225-252-01	CUSHION (FOOT)	
69	1-796-485-51	DECK, MECHANICAL (CWM43FF-05)	
70	4-252-200-01	BUTTON COVER	
71	4-252-206-01	BUTTON, STOP	
72	4-252-205-01	BUTTON, PLAY	
73	1-773-317-11	WIRE (FLAT TYPE) (31 CORE) (AEP, UK, RU)	
73	1-775-251-11	WIRE (FLAT TYPE) (27 CORE) (EXCEPT AEP, UK, RU)	
74	A-4750-783-A	PANEL BOARD, COMPLETE (AEP, UK)	
74	A-4750-794-A	PANEL BOARD, COMPLETE (SP, E3, E15, AUS)	
74	A-4752-201-A	PANEL BOARD, COMPLETE (RU)	
74	A-4752-206-A	PANEL BOARD, COMPLETE (EA)	

6-3. MAIN BOARD SECTION

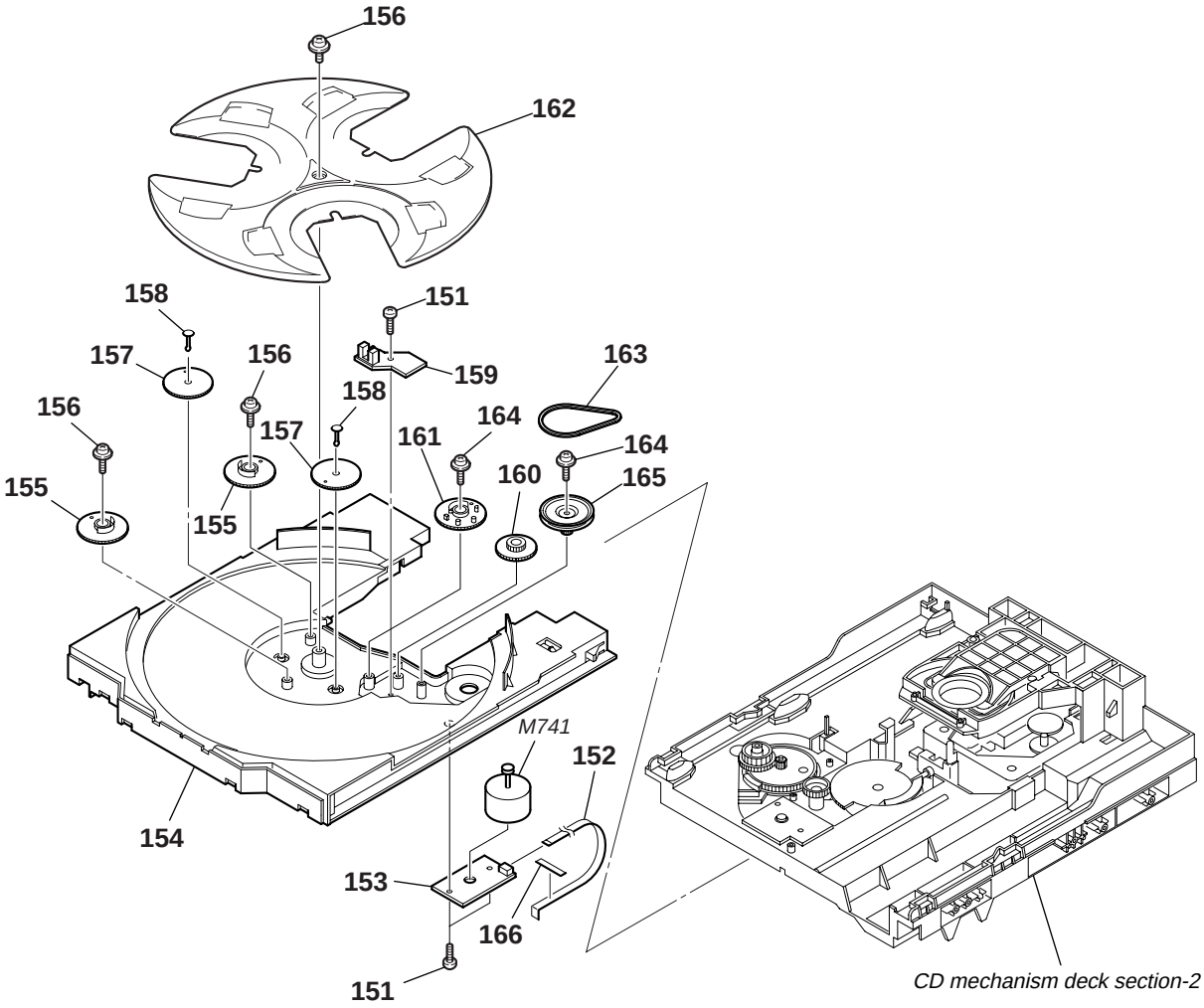


Ref. No.	Part No.	Description	Remarks
101	4-242-527-01	S-SCREW, ITC+4-8 R	
102	A-4750-788-A	AMP BOARD, COMPLETE (AEP, UK, RU)	
102	A-4750-799-A	AMP BOARD, COMPLETE (SP, E3, E15)	
102	A-4752-212-A	AMP BOARD, COMPLETE (EA)	
102	A-4752-217-A	AMP BOARD, COMPLETE (AUS)	
⚠103	1-696-570-11	CORD, POWER (EA)	
⚠103	1-696-848-12	CORD, POWER (AUS)	
⚠103	1-777-071-83	CORD, POWER (AEP, UK, SP, RU)	
⚠103	1-792-381-11	CORD, POWER (E15)	
⚠103	1-827-226-11	CORD, POWER (E3)	
* 104	3-703-244-00	BUSHING (2104), CORD (E15)	
104	3-703-571-11	BUSHING (S) (4516), CORD (E3, E15)	
105	4-988-533-01	HOLDER, PWB	
106	A-4750-771-A	MAIN BOARD, COMPLETE	(SP, EA, E3, E15, AUS)
106	A-4752-230-A	MAIN BOARD, COMPLETE (AEP, UK)	
106	A-4752-430-A	MAIN BOARD, COMPLETE (RU)	
107	4-242-539-01	BVIT3B+3-8R W/O SLOT	
108	3-905-609-31	SCREW (TRANSISTOR) (MX)	
108	3-905-609-41	SCREW (TRANSISTOR) (EXCEPT MX)	

Ref. No.	Part No.	Description	Remarks
109	A-4752-215-A	TRANS BOARD, COMPLETE (AUS)	
109	A-4752-266-A	TRANS BOARD, COMPLETE (AEP, UK, RU)	
109	A-4752-620-A	TRANS BOARD, COMPLETE (SP, E3, E15)	
⚠PT901	1-443-235-11	TRANSFORMER, POWER (AEP, UK, RU)	
⚠PT901	1-443-237-11	TRANSFORMER, POWER (SP, E3, E15, AUS)	
⚠PT901	1-443-282-11	TRANSFORMER, POWER (EA)	
⚠F904	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (T6.3AL/250V)	(AEP, UK, RU)
⚠F904	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8.0AL/250V)	(SP, EA, E3, E15, AUS)
⚠F905	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (T6.3AL/250V)	(AEP, UK, RU)
⚠F905	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8.0AL/250V)	(SP, EA, E3, E15, AUS)
⚠F906	1-533-470-12	FUSE, GLASS TUBE (DIA. 5) (T3.15AL/250V)	
⚠F907	1-533-470-12	FUSE, GLASS TUBE (DIA. 5) (T3.15AL/250V)	
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-881-09	SCREW +BVTT 4X8	
#4	7-685-649-79	SCREW +BVTP 3X14 TYPE2 IT-3	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

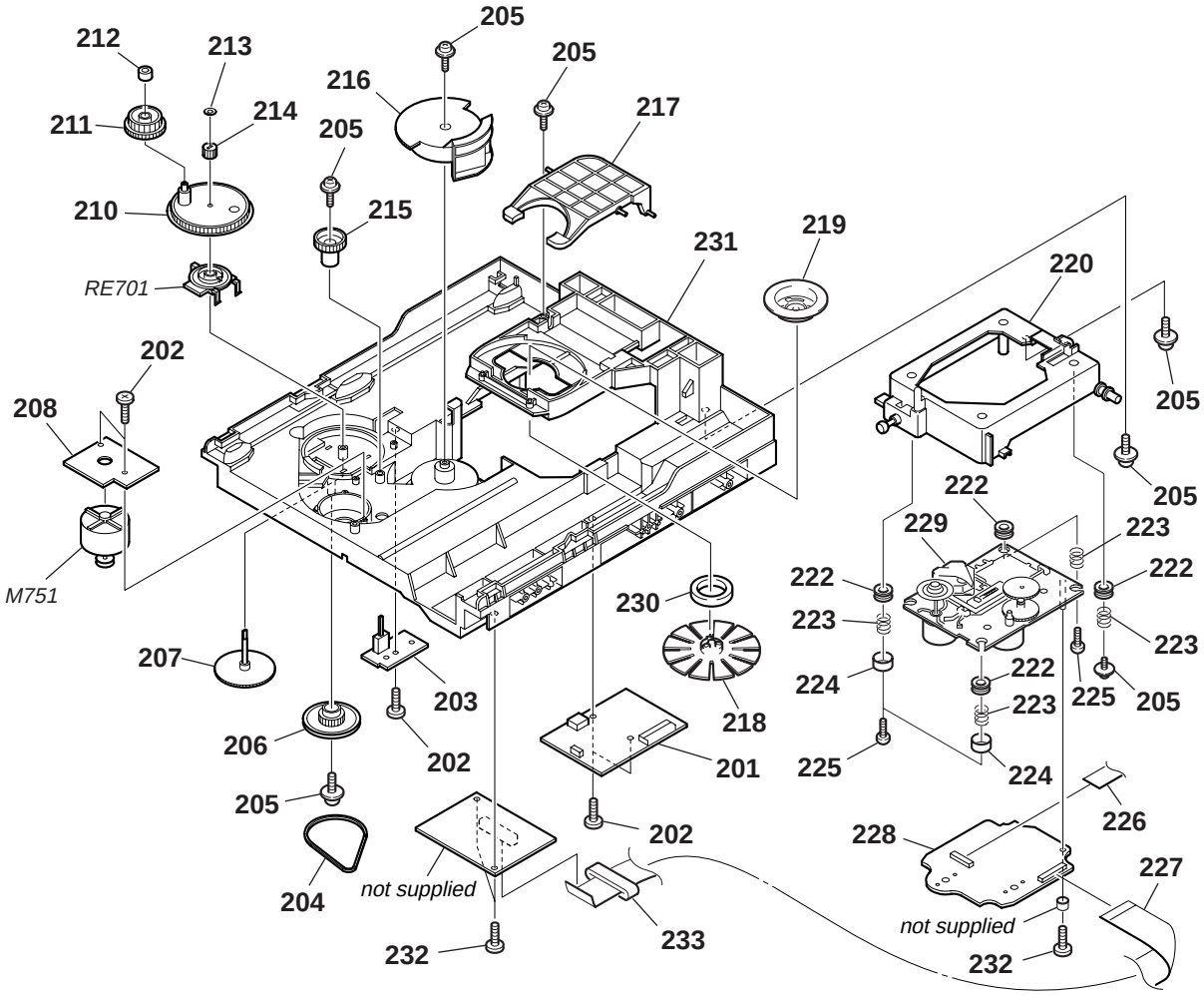
6-4. CD MECHANISM DECK SECTION -1 (CDM74-F1BD81)



Ref. No.	Part No.	Description	Remarks
151	4-218-253-21	SCREW (M2.6), +BTTP	
152	1-776-182-11	WIRE (FLAT TYPE) (5 CORE)	
153	1-687-134-12	MOTOR (TB) BOARD	
154	4-243-815-01	TABLE (LOADING)	
155	4-245-571-02	GEAR (STOPPER)	
156	4-218-252-61	SCREW (+PTPWH M2.6), FLOATING	
157	4-245-570-01	GEAR (JOINT)	
158	4-245-572-01	BUSHING (GEAR)	
159	1-687-132-12	SENSOR BOARD	

Ref. No.	Part No.	Description	Remarks
160	4-243-820-01	GEAR (TABLE)	
161	4-243-819-01	GEAR (GENEVA)	
162	4-243-816-01	TRAY	
163	4-243-823-01	BELT (TABLE)	
164	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
165	4-243-821-01	PULLEY (TABLE)	
166	3-231-598-01	SHEET (BA)	
M741	A-4723-963-A	MOTOR ASSY, TABLE	

6-5. CD MECHANISM DECK SECTION -2 (CDM74-F1BD81)



Ref. No.	Part No.	Description	Remarks
201	1-687-135-12	DRIVER BOARD	
202	4-218-253-31	SCREW (M2.6), +BTTP	
203	1-687-669-12	SW BOARD	
204	4-244-034-01	BELT (LOADING)	
205	4-218-252-61	SCREW (+PTPWH M2.6), FLOATING	
206	4-225-844-01	GEAR (LOADING A)	
207	4-224-613-01	GEAR (SHAFT)	
208	1-687-133-12	MOTOR (LD) BOARD	
210	4-244-108-01	GEAR, SWING	
211	4-224-609-01	GEAR (LOADING C)	
212	4-224-608-01	COLLAR, SWING	
213	3-016-533-11	WASHER (FR), STOPPER	
214	4-224-611-01	GEAR (LOADING B)	
215	4-224-606-01	GEAR (RV)	
216	4-243-818-01	GEAR (U/D)	
217	4-243-822-02	LEVER (LIFTER)	
218	X-4955-707-2	PULLEY (A5) ASSY, CHUCKING	

Ref. No.	Part No.	Description	Remarks
219	4-231-189-01	PULLEY (B), CHUCKING	
220	X-4955-536-1	HOLDER (213) ASSY	
222	4-227-549-11	INSULATOR	
223	4-227-045-31	SPRING (INSULATOR), COIL	
224	4-231-151-01	STOPPER (BU)	
225	4-218-253-31	SCREW (M2.6), +BTTP	
226	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)	
227	1-773-048-11	WIRE (FLAT TYPE) (17 CORE)	
⚠229	8-820-244-01	OPTICAL PICK-UP (KSM-215DCP/C2NP)	
228	A-4751-431-A	BD81A BOARD, COMPLETE	
230	1-471-035-11	MAGNET ASSY	
231	4-243-817-01	CHASSIS	
232	4-951-620-01	SCREW (2.6X8), +BVTP	
233	1-469-854-11	CORE, FERRITE (EXCEPT E15)	
M751	A-4736-655-A	MOTOR ASSY, LOADING	
RE701	1-477-680-12	ENCODER, ROTARY	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SECTION 7
ELECTRICAL PARTS LIST

1 STREAM LED AMP

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- Abbreviation
  AUS : Australian model
  E3 : 240V AC Area in E model
  E15 : Iran model
  EA : Saudi Arabia model
  RU : Russian model
  SP : Singapore model

Ref. No.	Part No.	Description			Remarks
		1 STREAM LED BOARD			
		**********			
		< LED >			
LED851	6-500-809-01	DIODE SELU5223C-STP15			
					(ILUMINATION LIGHT)
		< RESISTOR >			
R852	1-216-182-00	RES-CHIP	220	5%	1/8W
R853	1-216-837-11	METAL CHIP	22K	5%	1/10W
		< SWITCH >			
S851	1-418-632-11	ENCODER, ROTARY (MASTER VOLUME)			
		< SWITCH >			
SW851	1-786-289-11	SWITCH, DETECTION			
**********					
	A-4750-788-A	AMP BOARD, COMPLETE (AEP, UK, RU)			
	A-4750-799-A	AMP BOARD, COMPLETE (SP, E3, E15)			
	A-4752-212-A	AMP BOARD, COMPLETE (EA)			
	A-4752-217-A	AMP BOARD, COMPLETE (AUS)			
		**********			
	7-685-872-09	SCREW +BVTT 3X8 (S)(SP, EA, E3, E15, AUS)			
		< CAPACITOR >			
C402	1-162-306-11	CERAMIC	0.01uF	20%	16V
C403	1-137-749-11	MYLAR	0.1uF		100V
C404	1-137-749-11	MYLAR	0.1uF		100V
C405	1-127-812-11	ELECT	3300uF	20%	63V
					(SP, EA, E3, E15, AUS)
C405	1-135-832-11	ELECT	2200uF	20%	50V
					(AEP, UK, RU)
C406	1-127-812-11	ELECT	3300uF	20%	63V
					(SP, EA, E3, E15, AUS)
C406	1-135-832-11	ELECT	2200uF	20%	50V
					(AEP, UK, RU)
C407	1-162-306-11	CERAMIC	0.01uF	20%	16V
C408	1-162-306-11	CERAMIC	0.01uF	20%	16V
C411	1-162-306-11	CERAMIC	0.01uF	20%	16V
					(EXCEPT AEP, UK, RU)
C441	1-126-964-11	ELECT	10uF	20%	50V
C442	1-126-964-11	ELECT	10uF	20%	50V
C443	1-162-294-31	CERAMIC	0.001uF	10%	50V
C444	1-162-294-31	CERAMIC	0.001uF	10%	50V
C445	1-162-282-31	CERAMIC	100PF	10%	50V

Ref. No.	Part No.	Description			Remarks
C446	1-162-282-31	CERAMIC	100PF	10%	50V
C447	1-126-965-11	ELECT	22uF	20%	50V
C448	1-126-965-11	ELECT	22uF	20%	50V
C451	1-136-497-81	FILM	0.1uF	5%	50V
C452	1-136-497-81	FILM	0.1uF	5%	50V
C453	1-136-497-81	FILM	0.1uF	5%	50V
C454	1-136-497-81	FILM	0.1uF	5%	50V
C455	1-136-497-81	FILM	0.1uF	5%	50V
					(AEP, UK, RU)
C456	1-136-497-81	FILM	0.1uF	5%	50V
					(AEP, UK, RU)
C457	1-136-497-81	FILM	0.1uF	5%	50V
					(AEP, UK, RU)
C458	1-136-497-81	FILM	0.1uF	5%	50V
					(AEP, UK, RU)
C459	1-162-294-31	CERAMIC	0.001uF	10%	50V
					(AEP, UK, RU)
C460	1-162-294-31	CERAMIC	0.001uF	10%	50V
					(AEP, UK, RU)
C481	1-104-658-91	ELECT	100uF	20%	10V
C486	1-126-961-11	ELECT	2.2uF	20%	50V
C487	1-126-963-11	ELECT	4.7uF	20%	50V
C488	1-126-965-11	ELECT	22uF	20%	50V
C489	1-128-563-11	ELECT	100uF	20%	100V
C491	1-162-294-31	CERAMIC	0.001uF	10%	50V
					(AEP, UK, RU)
C492	1-162-306-11	CERAMIC	0.01uF	20%	16V
					(EXCEPT AEP, UK, RU)
		< CONNECTOR >			
CN441	1-778-981-21	CONNECTOR, BOARD TO BOARD 13P			
		< DIODE >			
D401	6-500-360-01	DIODE D10XB20			
D441	8-719-991-33	DIODE 1SS133T-77			
D442	8-719-991-33	DIODE 1SS133T-77			
D443	8-719-991-33	DIODE 1SS133T-77			
D481	8-719-991-33	DIODE 1SS133T-77			
D482	8-719-991-33	DIODE 1SS133T-77			
D483	8-719-991-33	DIODE 1SS133T-77			
		< EARTH TERMINAL >			
* EP401	1-537-738-21	TERMINAL, EARTH			
* EP402	1-537-738-21	TERMINAL, EARTH			
* EP491	1-537-738-21	TERMINAL, EARTH (EXCEPT AEP, UK, RU)			

AMP **BD81A**

Ref. No.	Part No.	Description			Remarks
		< IC >			
⚠IC441	6-600-221-01	IC STK403-130 (SP, EA, E3, E15, AUS)			
⚠IC441	6-705-845-01	IC STK403-090 (AEP, UK, RU)			
		< TERMINAL BOARD >			
JK441	1-694-884-11	TERMINAL BOARD (4P) (SPEAKER)			
		< COIL >			
L441	1-422-009-13	COIL, AIR-CORE			
L442	1-422-009-13	COIL, AIR-CORE			
		< TRANSISTOR >			
Q441	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA		
Q442	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA		
Q481	8-729-119-79	TRANSISTOR	2SC2785-FEK		
Q482	8-729-119-79	TRANSISTOR	2SC2785-FEK		
Q483	8-729-119-79	TRANSISTOR	2SC2785-FEK		
Q484	8-729-119-79	TRANSISTOR	2SC2785-FEK		
Q485	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q486	8-729-119-79	TRANSISTOR	2SC2785-FEK		
Q487	8-729-119-79	TRANSISTOR	2SC2785-FEK		
Q488	8-729-119-79	TRANSISTOR	2SC2785-FEK		
Q489	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA		
		< RESISTOR >			
R401	1-249-441-11	CARBON	100K	5% 1/4W	
R402	1-249-441-11	CARBON	100K	5% 1/4W	
R407	1-260-087-11	CARBON	100	5% 1/2W	
R411	1-249-421-11	CARBON	2.2K	5% 1/4W	
R412	1-249-421-11	CARBON	2.2K	5% 1/4W	
R413	1-249-425-11	CARBON	4.7K	5% 1/4W	
R414	1-249-425-11	CARBON	4.7K	5% 1/4W	
R441	1-249-417-11	CARBON	1K	5% 1/4W	
R442	1-249-417-11	CARBON	1K	5% 1/4W	
R443	1-249-435-11	CARBON	33K	5% 1/4W	(AEP, UK, RU)
R443	1-249-437-11	CARBON	47K	5% 1/4W	(SP, EA, E3, E15, AUS)
R444	1-249-435-11	CARBON	33K	5% 1/4W	(AEP, UK, RU)
R444	1-249-437-11	CARBON	47K	5% 1/4W	(SP, EA, E3, E15, AUS)
R445	1-249-417-11	CARBON	1K	5% 1/4W	
R446	1-249-417-11	CARBON	1K	5% 1/4W	
R447	1-249-435-11	CARBON	33K	5% 1/4W	(AEP, UK, RU)
R447	1-249-437-11	CARBON	47K	5% 1/4W	(SP, EA, E3, E15, AUS)
R448	1-249-435-11	CARBON	33K	5% 1/4W	(AEP, UK, RU)
R448	1-249-437-11	CARBON	47K	5% 1/4W	(SP, EA, E3, E15, AUS)
⚠R451	1-217-151-00	METAL	0.22	10% 2W	(AEP, UK, RU)
⚠R451	1-217-156-00	METAL	0.22	10% 5W	(SP, EA, E3, E15, AUS)
⚠R452	1-217-151-00	METAL	0.22	10% 2W	(AEP, UK, RU)
⚠R452	1-217-156-00	METAL	0.22	10% 5W	(SP, EA, E3, E15, AUS)
R453	1-260-076-11	CARBON	10	5% 1/2W	
R454	1-260-076-11	CARBON	10	5% 1/2W	
R455	1-249-417-11	CARBON	1K	5% 1/4W	
R456	1-249-417-11	CARBON	1K	5% 1/4W	
R457	1-249-433-11	CARBON	22K	5% 1/4W	
R458	1-249-433-11	CARBON	22K	5% 1/4W	
R459	1-249-437-11	CARBON	47K	5% 1/4W	
R460	1-249-437-11	CARBON	47K	5% 1/4W	
R461	1-260-076-11	CARBON	10	5% 1/2W	
R462	1-260-076-11	CARBON	10	5% 1/2W	
R463	1-260-076-11	CARBON	10	5% 1/2W	(AEP, UK, RU)
R464	1-260-076-11	CARBON	10	5% 1/2W	(AEP, UK, RU)
R465	1-249-437-11	CARBON	47K	5% 1/4W	
R466	1-249-438-11	CARBON	56K	5% 1/4W	
R467	1-249-435-11	CARBON	33K	5% 1/4W	
R481	1-249-425-11	CARBON	4.7K	5% 1/4W	
R482	1-249-429-11	CARBON	10K	5% 1/4W	
R483	1-247-791-91	CARBON	22	5% 1/4W	
R484	1-249-438-11	CARBON	56K	5% 1/4W	
R485	1-249-441-11	CARBON	100K	5% 1/4W	
R486	1-249-441-11	CARBON	100K	5% 1/4W	
R487	1-249-435-11	CARBON	33K	5% 1/4W	
R488	1-249-433-11	CARBON	22K	5% 1/4W	
R489	1-249-425-11	CARBON	4.7K	5% 1/4W	
R490	1-249-425-11	CARBON	4.7K	5% 1/4W	
R491	1-249-433-11	CARBON	22K	5% 1/4W	
R492	1-249-417-11	CARBON	1K	5% 1/4W	
R493	1-249-435-11	CARBON	33K	5% 1/4W	
R494	1-249-421-11	CARBON	2.2K	5% 1/4W	
⚠R495	1-217-831-11	FUSIBLE	1	5% 1/4W	
⚠R496	1-212-881-11	FUSIBLE	100	5% 1/4W	
		< RELAY >			
RY441	1-755-373-11	RELAY			
		< THERMISTOR >			
TH441	1-807-796-11	THERMISTOR			
**********					
	A-4751-431-A	BD81A BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C10	1-165-989-11	CERAMIC CHIP	10uF	10% 6.3V	
C11	1-165-989-11	CERAMIC CHIP	10uF	10% 6.3V	
C14	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C15	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C16	1-115-156-11	CERAMIC CHIP	1uF	10V	
C17	1-126-246-11	ELECT CHIP	220uF	20% 4V	
C18	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	
C111	1-162-967-11	CERAMIC CHIP	0.0033uF	10% 50V	
C112	1-164-315-11	CERAMIC CHIP	470PF	5% 50V	
C113	1-162-967-11	CERAMIC CHIP	0.0033uF	10% 50V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

BD81A

Ref. No.	Part No.	Description			Remarks
C114	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C115	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C116	1-128-995-21	ELECT CHIP	100uF	20%	10V
C122	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C123	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C124	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C125	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C131	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C132	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C133	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C134	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C141	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C142	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C143	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C151	1-128-995-21	ELECT CHIP	100uF	20%	10V
C161	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C162	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C163	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C171	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C172	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C174	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C181	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C182	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C183	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C184	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C185	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C186	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C194	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C195	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C196	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C201	1-128-995-21	ELECT CHIP	100uF	20%	10V
C203	1-128-995-21	ELECT CHIP	100uF	20%	10V
C209	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C210	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C211	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C212	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C213	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C251	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C252	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C255	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C257	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C258	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C259	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C260	1-128-394-11	ELECT CHIP	220uF	20%	10V
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C305	1-126-246-11	ELECT CHIP	220uF	20%	4V
C306	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C307	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C308	1-126-208-21	ELECT CHIP	47uF	20%	4V
C309	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C310	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C311	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C312	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C313	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C314	1-126-208-21	ELECT CHIP	47uF	20%	4V
C315	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C316	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C317	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remarks
C318	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C320	1-216-864-11	SHORT CHIP	0		
		< CONNECTOR >			
CN101	1-770-425-11	CONNECTOR, FFC/FPC 16P			
CN201	1-818-350-11	CONNECTOR (FFC) 27P			
		< FERRITE BEAD >			
FB301	1-500-445-21	FERRITE, EMI (SMD) (2012)			
		< IC >			
IC101	8-752-425-12	IC CXD3059AR			
IC251	6-705-808-01	IC BA5947FM			
IC301	6-705-365-01	IC TC94A34FG-002			
IC303	6-705-807-01	IC BH15FB1WG			
		< TRANSISTOR >			
Q10	6-550-363-01	TRANSISTOR	2SB1690KT146		
		< RESISTOR >			
R10	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R11	1-216-864-11	SHORT CHIP	0		
R12	1-216-845-11	METAL CHIP	100K	5%	1/10W
R13	1-218-446-11	METAL CHIP	1	5%	1/10W
R111	1-216-821-11	METAL CHIP	1K	5%	1/10W
R112	1-216-835-11	METAL CHIP	15K	5%	1/10W
R113	1-216-821-11	METAL CHIP	1K	5%	1/10W
R114	1-216-835-11	METAL CHIP	15K	5%	1/10W
R121	1-216-835-11	METAL CHIP	15K	5%	1/10W
R131	1-216-857-11	METAL CHIP	1M	5%	1/10W
R132	1-216-833-11	METAL CHIP	10K	5%	1/10W
R133	1-216-848-11	METAL CHIP	180K	5%	1/10W
R141	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R142	1-216-821-11	METAL CHIP	1K	5%	1/10W
R143	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R151	1-216-864-11	SHORT CHIP	0		
R161	1-216-809-11	METAL CHIP	100	5%	1/10W
R162	1-216-841-11	METAL CHIP	47K	5%	1/10W
R163	1-216-809-11	METAL CHIP	100	5%	1/10W
R165	1-216-864-11	SHORT CHIP	0		
R171	1-216-817-11	METAL CHIP	470	5%	1/10W
R172	1-216-857-11	METAL CHIP	1M	5%	1/10W
R173	1-216-295-91	SHORT CHIP	0		
R181	1-216-809-11	METAL CHIP	100	5%	1/10W
R182	1-216-809-11	METAL CHIP	100	5%	1/10W
R191	1-216-864-11	SHORT CHIP	0		
R201	1-500-445-21	FERRITE, EMI (SMD) (2012)			
R203	1-216-864-11	SHORT CHIP	0		
R204	1-500-445-21	FERRITE, EMI (SMD) (2012)			
R205	1-216-864-11	SHORT CHIP	0		
R251	1-216-833-11	METAL CHIP	10K	5%	1/10W
R252	1-216-837-11	METAL CHIP	22K	5%	1/10W
R253	1-216-833-11	METAL CHIP	10K	5%	1/10W
R301	1-216-845-11	METAL CHIP	100K	5%	1/10W
R302	1-216-833-11	METAL CHIP	10K	5%	1/10W
R303	1-216-845-11	METAL CHIP	100K	5%	1/10W
R305	1-216-845-11	METAL CHIP	100K	5%	1/10W

BD81A **CONNECT** **DRIVER** **GAME JACK**

Ref. No.	Part No.	Description			Remarks
R306	1-216-864-11	SHORT CHIP	0		
R307	1-216-833-11	METAL CHIP	10K	5%	1/10W
R313	1-216-813-11	METAL CHIP	220	5%	1/10W
R351	1-216-809-11	METAL CHIP	100	5%	1/10W
R352	1-216-809-11	METAL CHIP	100	5%	1/10W
R353	1-216-809-11	METAL CHIP	100	5%	1/10W
R354	1-216-809-11	METAL CHIP	100	5%	1/10W
R401	1-216-809-11	METAL CHIP	100	5%	1/10W
R402	1-216-809-11	METAL CHIP	100	5%	1/10W
R403	1-216-809-11	METAL CHIP	100	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/10W
R405	1-216-809-11	METAL CHIP	100	5%	1/10W
R406	1-216-809-11	METAL CHIP	100	5%	1/10W
R407	1-216-809-11	METAL CHIP	100	5%	1/10W
R408	1-216-809-11	METAL CHIP	100	5%	1/10W
R409	1-216-809-11	METAL CHIP	100	5%	1/10W
R410	1-216-809-11	METAL CHIP	100	5%	1/10W
R411	1-216-809-11	METAL CHIP	100	5%	1/10W
R412	1-216-809-11	METAL CHIP	100	5%	1/10W
R419	1-216-809-11	METAL CHIP	100	5%	1/10W
		< SWITCH >			
S101	1-771-853-11	SWITCH,DETECTION (LIMIT)			
		< VIBRATOR >			
X171	1-767-408-21	VIBRATOR, CRYSTAL (16.9MHz)			
**********					
		CONNECT BOARD			
		**********			
		< CAPACITOR >			
C871	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C872	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C873	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C874	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C875	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C876	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN871	1-779-295-11	CONNECTOR, FFC (LIF (NON-ZIF)) 27P			
CN873	1-784-778-11	CONNECTOR, FFC 17P			
* CN874	1-564-725-11	PIN, CONNECTOR (SMALL TYPE) 9P			
		< FERRITE BEAD >			
FB871	1-216-864-11	SHORT CHIP	0		
FB872	1-216-864-11	SHORT CHIP	0		
		< SHORT >			
JR871	1-216-864-11	SHORT CHIP	0		
JR872	1-216-864-11	SHORT CHIP	0		
**********					
	1-687-135-12	DRIVER BOARD			
		**********			
		< CAPACITOR >			
C715	1-126-933-11	ELECT	100uF	20%	16V

Ref. No.	Part No.	Description			Remarks
C731	1-126-964-11	ELECT	10uF	20%	50V
C735	1-164-159-21	CERAMIC	0.1uF		50V
C736	1-164-159-21	CERAMIC	0.1uF		50V
C737	1-164-159-21	CERAMIC	0.1uF		50V
C741	1-162-306-11	CERAMIC	0.01uF	20%	16V
C751	1-162-306-11	CERAMIC	0.01uF	20%	16V
C752	1-164-159-21	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN701	1-785-338-11	PIN, CONNECTOR (LIGHT ANGLE) 12P			
CN702	1-784-766-11	CONNECTOR, FFC 5P			
* CN703	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN704	1-785-328-11	PIN, CONNECTOR (LIGHT ANGLE) 2P			
		< DIODE >			
D701	8-719-921-42	DIODE MTZJ-5.1A			
D711	8-719-109-69	DIODE RD3.6ESB2			
		< IC >			
IC701	8-759-598-69	IC BA6956AN			
IC712	8-759-598-69	IC BA6956AN			
		< TRANSISTOR >			
Q731	8-729-029-66	TRANSISTOR	DTC114ESA		
		< RESISTOR >			
R701	1-249-413-11	CARBON	470	5%	1/4W
R702	1-247-807-31	CARBON	100	5%	1/4W
R711	1-249-417-11	CARBON	1K	5%	1/4W
R712	1-249-425-11	CARBON	4.7K	5%	1/4W
R713	1-249-433-11	CARBON	22K	5%	1/4W
R721	1-249-425-11	CARBON	4.7K	5%	1/4W
R722	1-249-425-11	CARBON	4.7K	5%	1/4W
R723	1-249-425-11	CARBON	4.7K	5%	1/4W
R731	1-247-807-31	CARBON	100	5%	1/4W
R732	1-249-429-11	CARBON	10K	5%	1/4W
R733	1-249-417-11	CARBON	1K	5%	1/4W
R734	1-249-430-11	CARBON	12K	5%	1/4W
R735	1-247-807-31	CARBON	100	5%	1/4W
R751	1-249-425-11	CARBON	4.7K	5%	1/4W
**********					
		GAME JACK BOARD			
		**********			
		< CAPACITOR >			
C801	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C802	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C803	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C804	1-165-128-11	CERAMIC CHIP	0.22uF		16V
		< JACK >			
J804	1-815-684-11	JACK, PIN 3P (GAME INPUT)			
		< SHORT >			
JR801	1-216-864-11	SHORT CHIP	0		

GAME JACK | H/P JACK | MAIN

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R801	1-216-833-11	METAL CHIP	10K	5%	1/10W
R802	1-216-833-11	METAL CHIP	10K	5%	1/10W
R803	1-216-837-11	METAL CHIP	22K	5%	1/10W
R804	1-216-837-11	METAL CHIP	22K	5%	1/10W
**********					
		H/P JACK BOARD			
		**********			
		< CAPACITOR >			
C830	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C831	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C832	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< JACK >			
J801	1-793-829-11	JACK, HEADPHONE (PHONES)			
**********					
	A-4750-771-A	MAIN BOARD, COMPLETE			(SP, EA, E3, E15, AUS)
	A-4752-230-A	MAIN BOARD, COMPLETE (AEP, UK)			
	A-4752-430-A	MAIN BOARD, COMPLETE (RU)			
		**********			
	7-685-872-09	SCREW +BVTT 3X8 (S)			
		< CAPACITOR >			
C101	1-126-960-11	ELECT	1uF	20%	50V
C102	1-126-960-11	ELECT	1uF	20%	50V
C103	1-126-956-91	ELECT	0.1uF	20%	50V
C104	1-126-956-91	ELECT	0.1uF	20%	50V
C105	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C106	1-131-679-31	FILM	0.01uF	5%	50V
C107	1-126-964-11	ELECT	10uF	20%	50V
C108	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C109	1-131-679-31	FILM	0.01uF	5%	50V
C110	1-126-964-11	ELECT	10uF	20%	50V
C111	1-126-960-11	ELECT	1uF	20%	50V
C112	1-126-960-11	ELECT	1uF	20%	50V
C113	1-126-960-11	ELECT	1uF	20%	50V
C114	1-126-960-11	ELECT	1uF	20%	50V
C115	1-131-679-31	FILM	0.01uF	5%	50V
C116	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C117	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C118	1-126-964-11	ELECT	10uF	20%	50V
C119	1-131-679-31	FILM	0.01uF	5%	50V
C120	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C121	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C122	1-126-964-11	ELECT	10uF	20%	50V
C123	1-126-965-91	ELECT	22uF	20%	50V
C124	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C125	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C127	1-104-658-91	ELECT	100uF	20%	10V
C128	1-104-658-91	ELECT	100uF	20%	10V
C129	1-126-947-11	ELECT	47uF	20%	35V
C132	1-126-947-11	ELECT	47uF	20%	35V
C135	1-131-690-31	FILM	0.068uF	5%	50V
C136	1-131-690-31	FILM	0.068uF	5%	50V
C137	1-126-964-11	ELECT	10uF	20%	50V
C138	1-126-964-11	ELECT	10uF	20%	50V
C139	1-131-690-31	FILM	0.068uF	5%	50V
C140	1-131-690-31	FILM	0.068uF	5%	50V
C141	1-126-964-11	ELECT	10uF	20%	50V
C142	1-126-964-11	ELECT	10uF	20%	50V
C143	1-126-960-11	ELECT	1uF	20%	50V
C144	1-136-165-00	FILM	0.1uF	5%	50V
C145	1-126-964-11	ELECT	10uF	20%	50V
C146	1-136-165-00	FILM	0.1uF	5%	50V
C147	1-126-964-11	ELECT	10uF	20%	50V
C148	1-131-679-31	FILM	0.01uF	5%	50V
C149	1-131-679-31	FILM	0.01uF	5%	50V
C150	1-131-679-31	FILM	0.01uF	5%	50V
C151	1-131-679-31	FILM	0.01uF	5%	50V
C152	1-130-475-00	MYLAR	0.0022uF	5%	50V
C153	1-130-475-00	MYLAR	0.0022uF	5%	50V
C154	1-131-700-31	FILM	0.47uF	5%	50V
C157	1-126-960-11	ELECT	1uF	20%	50V
C159	1-126-960-11	ELECT	1uF	20%	50V
C160	1-126-960-11	ELECT	1uF	20%	50V
C161	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V (AEP, UK, RU)
C162	1-126-960-11	ELECT	1uF	20%	50V
C163	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V (AEP, UK)
C164	1-126-960-11	ELECT	1uF	20%	50V
C165	1-126-960-11	ELECT	1uF	20%	50V
C166	1-126-960-11	ELECT	1uF	20%	50V
C175	1-109-953-11	ELECT	2.2uF	20%	50V
C176	1-126-964-11	ELECT	10uF	20%	50V
C177	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C178	1-126-947-11	ELECT	47uF	20%	35V
C179	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C180	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C181	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C182	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C183	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C184	1-126-947-11	ELECT	47uF	20%	35V
C185	1-126-964-11	ELECT	10uF	20%	50V
C186	1-126-947-11	ELECT	47uF	20%	35V
C187	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C188	1-126-965-91	ELECT	22uF	20%	50V
C189	1-126-965-91	ELECT	22uF	20%	50V
C190	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C191	1-126-961-11	ELECT	2.2uF	20%	50V
C192	1-126-961-11	ELECT	2.2uF	20%	50V
C193	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C206	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C211	1-109-953-11	ELECT	2.2uF	20%	50V
C212	1-126-964-11	ELECT	10uF	20%	50V
C213	1-126-964-11	ELECT	10uF	20%	50V
C214	1-126-926-11	ELECT	1000uF	20%	10V
C216	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C217	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C222	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C228	1-164-156-11	CERAMIC CHIP	0.1uF		25V (SP, EA, E3, E15, AUS)
C229	1-126-963-11	ELECT	4.7uF	20%	50V (SP, EA, E3, E15, AUS)

MAIN

Ref. No.	Part No.	Description			Remarks
C230	1-126-947-11	ELECT	47uF	20%	35V (SP, EA, E3, E15, AUS)
C231	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C235	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C241	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C242	1-130-479-00	MYLAR	0.0047uF	5%	50V
C243	1-131-681-31	FILM	0.015uF	5%	50V
C244	1-131-681-31	FILM	0.015uF	5%	50V
C245	1-131-681-31	FILM	0.015uF	5%	50V (SP, EA, E3, E15, AUS)
C246	1-131-681-31	FILM	0.015uF	5%	50V (AEP, UK, RU)
C248	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C249	1-126-964-11	ELECT	10uF	20%	50V
C250	1-126-947-11	ELECT	47uF	20%	35V
C251	1-126-947-11	ELECT	47uF	20%	35V
C252	1-126-933-11	ELECT	100uF	20%	16V
C253	1-126-956-91	ELECT	0.1uF	20%	50V
C258	1-126-959-11	ELECT	0.47uF	20%	50V
C259	1-126-957-11	ELECT	0.22uF	20%	50V
C264	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C265	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C266	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C267	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C270	1-126-964-11	ELECT	10uF	20%	50V
C271	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V (AEP, UK, RU)
C272	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V (AEP, UK, RU)
C274	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C275	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C276	1-164-362-11	CERAMIC CHIP	470PF	5%	50V (AEP, UK)
C277	1-164-362-11	CERAMIC CHIP	470PF	5%	50V (AEP, UK, RU)
C278	1-164-362-11	CERAMIC CHIP	470PF	5%	50V (AEP, UK, RU)
C279	1-164-362-11	CERAMIC CHIP	470PF	5%	50V (AEP, UK, RU)
C280	1-164-362-11	CERAMIC CHIP	470PF	5%	50V (AEP, UK, RU)
C281	1-164-362-11	CERAMIC CHIP	470PF	5%	50V (AEP, UK, RU)
C301	1-136-165-00	FILM	0.1uF	5%	50V
C302	1-136-165-00	FILM	0.1uF	5%	50V
C303	1-136-165-00	FILM	0.1uF	5%	50V
C304	1-136-165-00	FILM	0.1uF	5%	50V
C305	1-136-165-00	FILM	0.1uF	5%	50V
C306	1-136-165-00	FILM	0.1uF	5%	50V
C308	1-126-965-91	ELECT	22uF	20%	50V
C309	1-126-965-91	ELECT	22uF	20%	50V
C310	1-126-944-11	ELECT	3300uF	20%	25V
C311	1-126-964-11	ELECT	10uF	20%	50V
C312	1-126-964-11	ELECT	10uF	20%	50V
C313	1-126-943-11	ELECT	2200uF	20%	25V
C315	1-126-933-11	ELECT	100uF	20%	16V
C316	1-126-943-11	ELECT	2200uF	20%	25V
C318	1-104-658-91	ELECT	100uF	20%	10V
C321	1-126-961-11	ELECT	2.2uF	20%	50V
C342	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C351	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C352	1-126-965-91	ELECT	22uF	20%	50V
C353	1-126-961-11	ELECT	2.2uF	20%	50V
C354	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C371	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C372	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C373	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C374	1-126-947-11	ELECT	47uF	20%	35V
C375	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C376	1-126-961-11	ELECT	2.2uF	20%	50V
		< CONNECTOR >			
CN101	1-568-830-11	CONNECTOR FFC 11P (UK)			
CN101	1-784-776-11	CONNECTOR, FFC 15P (AEP, UK)			
* CN103	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
* CN112	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
* CN301	1-568-950-11	PIN, CONNECTOR 12P			
CN302	1-568-844-11	CONNECTOR FFC 29P (UK)			
CN302	1-784-792-11	CONNECTOR, FFC 31P (AEP, UK)			
CN307	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P			
CN308	1-564-506-11	PLUG, CONNECTOR 3P (SP, EA, E3, E15, AUS)			
CN309	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
* CN314	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< DIODE >			
D201	8-719-988-61	DIODE 1SS355TE-17			
D202	8-719-083-63	DIODE UDZSTE-1713B (SP, EA, E3, E15, AUS)			
D206	8-719-988-61	DIODE 1SS355TE-17 (SP, EA, E3, E15, AUS)			
D207	8-719-988-61	DIODE 1SS355TE-17 (SP, EA, E3, E15, AUS)			
D211	8-719-988-61	DIODE 1SS355TE-17			
D212	8-719-988-61	DIODE 1SS355TE-17			
D213	8-719-988-61	DIODE 1SS355TE-17			
D214	8-719-988-61	DIODE 1SS355TE-17			
D215	8-719-988-61	DIODE 1SS355TE-17			
D301	6-500-522-21	DIODE 10EDB40-TB3			
D302	6-500-522-21	DIODE 10EDB40-TB3			
D303	6-500-522-21	DIODE 10EDB40-TB3			
D304	6-500-522-21	DIODE 10EDB40-TB3			
D305	6-500-522-21	DIODE 10EDB40-TB3			
D306	6-500-522-21	DIODE 10EDB40-TB3			
D307	6-500-522-21	DIODE 10EDB40-TB3			
D308	6-500-522-21	DIODE 10EDB40-TB3			
D309	6-500-522-21	DIODE 10EDB40-TB3			
D310	6-500-522-21	DIODE 10EDB40-TB3			
D311	6-500-522-21	DIODE 10EDB40-TB3			
D312	6-500-522-21	DIODE 10EDB40-TB3			
D313	8-719-085-36	DIODE 11EQS04-TB5			
D316	8-719-988-61	DIODE 1SS355TE-17			
D321	8-719-988-61	DIODE 1SS355TE-17			
D322	8-719-988-61	DIODE 1SS355TE-17			
D324	6-500-522-21	DIODE 10EDB40-TB3			
D325	6-500-522-21	DIODE 10EDB40-TB3			
D326	6-500-522-21	DIODE 10EDB40-TB3			
		< EARTH TERMINAL >			
EP101	1-537-770-21	TERMINAL BOARD, GROUND			
EP301	1-537-770-21	TERMINAL BOARD, GROUND			

MAIN

Ref. No.	Part No.	Description			Remarks
		< FERRITE BEAD >			
FB201	1-216-864-11	SHORT CHIP	0		
FB202	1-216-864-11	SHORT CHIP	0		
FB203	1-216-864-11	SHORT CHIP	0		
FB204	1-216-864-11	SHORT CHIP	0		
		< IC >			
IC101	6-705-852-01	IC BD3401KS2			
IC102	8-759-710-97	IC NJM4565M-D			
IC201	8-759-508-69	IC BA3126N			
IC301	6-702-771-01	IC TA78033LS			
IC302	6-702-771-01	IC TA78033LS			
IC303	8-759-701-59	IC NJM78M09FA			
IC304	8-759-701-59	IC NJM78M09FA			
IC371	6-704-046-01	IC BU2099FV			
		< COIL >			
L101	1-424-849-11	COIL, OSCILLATION (BIAS)			
		< TRANSISTOR >			
Q101	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q102	6-550-580-01	TRANSISTOR	2SA1235TP-1F		
Q103	8-729-802-80	TRANSISTOR	2SC3661		
Q104	8-729-802-80	TRANSISTOR	2SC3661		
Q105	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q106	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q107	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q304	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q305	6-550-580-01	TRANSISTOR	2SA1235TP-1F		
Q306	8-729-802-80	TRANSISTOR	2SC3661		
Q307	8-729-802-80	TRANSISTOR	2SC3661		
Q308	6-550-580-01	TRANSISTOR	2SA1235TP-1F		
Q309	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q310	8-729-142-46	TRANSISTOR	2SC2001-LK		(SP, EA, E3, E15, AUS)
Q311	8-729-142-46	TRANSISTOR	2SC2001-LK		(SP, EA, E3, E15, AUS)
Q312	8-729-041-19	TRANSISTOR	2SA953-T-K		
Q313	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q314	6-550-580-01	TRANSISTOR	2SA1235TP-1F		
Q315	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q321	8-729-142-46	TRANSISTOR	2SC2001-LK		
Q322	6-550-580-01	TRANSISTOR	2SA1235TP-1F		
Q323	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q324	8-729-140-04	TRANSISTOR	2SB1116A-L		
Q327	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q351	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q352	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q361	6-550-580-01	TRANSISTOR	2SA1235TP-1F		
Q362	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
		< RESISTOR >			
R101	1-216-833-11	METAL CHIP	10K	5%	1/10W
R102	1-216-833-11	METAL CHIP	10K	5%	1/10W
R103	1-216-851-11	METAL CHIP	330K	5%	1/10W
R104	1-216-835-11	METAL CHIP	15K	5%	1/10W
R105	1-216-816-11	METAL CHIP	390	5%	1/10W
R106	1-216-851-11	METAL CHIP	330K	5%	1/10W
R107	1-216-835-11	METAL CHIP	15K	5%	1/10W
R108	1-216-816-11	METAL CHIP	390	5%	1/10W
R109	1-216-853-11	METAL CHIP	470K	5%	1/10W
R110	1-216-851-11	METAL CHIP	330K	5%	1/10W
R111	1-216-847-11	METAL CHIP	150K	5%	1/10W
R112	1-216-853-11	METAL CHIP	470K	5%	1/10W
R113	1-216-851-11	METAL CHIP	330K	5%	1/10W
R114	1-216-847-11	METAL CHIP	150K	5%	1/10W
R115	1-216-857-11	METAL CHIP	1M	5%	1/10W
R116	1-216-809-11	METAL CHIP	100	5%	1/10W
R117	1-216-809-11	METAL CHIP	100	5%	1/10W
R119	1-216-841-11	METAL CHIP	47K	5%	1/10W
R120	1-216-857-11	METAL CHIP	1M	5%	1/10W
R121	1-216-841-11	METAL CHIP	47K	5%	1/10W
R127	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R128	1-216-835-11	METAL CHIP	15K	5%	1/10W
R129	1-216-841-11	METAL CHIP	47K	5%	1/10W
R131	1-216-835-11	METAL CHIP	15K	5%	1/10W
R132	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R133	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R134	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R135	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R136	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R137	1-216-833-11	METAL CHIP	10K	5%	1/10W
R138	1-216-821-11	METAL CHIP	1K	5%	1/10W
R139	1-216-864-11	SHORT CHIP	0		
R141	1-216-821-11	METAL CHIP	1K	5%	1/10W
R142	1-216-821-11	METAL CHIP	1K	5%	1/10W
R151	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R152	1-216-833-11	METAL CHIP	10K	5%	1/10W
R153	1-216-833-11	METAL CHIP	10K	5%	1/10W
R154	1-216-833-11	METAL CHIP	10K	5%	1/10W
R155	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R156	1-216-853-11	METAL CHIP	470K	5%	1/10W
R157	1-216-841-11	METAL CHIP	47K	5%	1/10W
R158	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R159	1-216-833-11	METAL CHIP	10K	5%	1/10W
R160	1-216-821-11	METAL CHIP	1K	5%	1/10W
R161	1-216-833-11	METAL CHIP	10K	5%	1/10W
R162	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R163	1-216-833-11	METAL CHIP	10K	5%	1/10W
R164	1-216-821-11	METAL CHIP	1K	5%	1/10W
R165	1-216-833-11	METAL CHIP	10K	5%	1/10W
R166	1-216-833-11	METAL CHIP	10K	5%	1/10W
R167	1-216-833-11	METAL CHIP	10K	5%	1/10W
R168	1-216-845-11	METAL CHIP	100K	5%	1/10W
R169	1-216-845-11	METAL CHIP	100K	5%	1/10W
R170	1-216-833-11	METAL CHIP	10K	5%	1/10W
R171	1-216-833-11	METAL CHIP	10K	5%	1/10W
R172	1-216-809-11	METAL CHIP	100	5%	1/10W
R173	1-216-833-11	METAL CHIP	10K	5%	1/10W
R174	1-216-833-11	METAL CHIP	10K	5%	1/10W
R175	1-216-833-11	METAL CHIP	10K	5%	1/10W
R176	1-216-849-11	METAL CHIP	220K	5%	1/10W
R177	1-216-849-11	METAL CHIP	220K	5%	1/10W
R194	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W

Ref. No.	Part No.	Description			Remarks
R195	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R196	1-216-864-11	SHORT CHIP	0		
R197	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R198	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R201	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R202	1-216-833-11	METAL CHIP	10K	5%	1/10W
R203	1-216-833-11	METAL CHIP	10K	5%	1/10W
R204	1-216-833-11	METAL CHIP	10K	5%	1/10W
R205	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R206	1-216-841-11	METAL CHIP	47K	5%	1/10W
R207	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R208	1-216-821-11	METAL CHIP	1K	5%	1/10W
R209	1-216-833-11	METAL CHIP	10K	5%	1/10W
R210	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R211	1-216-821-11	METAL CHIP	1K	5%	1/10W
R212	1-216-833-11	METAL CHIP	10K	5%	1/10W
R213	1-216-821-11	METAL CHIP	1K	5%	1/10W
R214	1-216-821-11	METAL CHIP	1K	5%	1/10W
R216	1-216-806-11	METAL CHIP	56	5%	1/10W
R217	1-216-806-11	METAL CHIP	56	5%	1/10W
R218	1-215-891-11	METAL OXIDE	680	5%	2W (AEP, UK, RU)
R218	1-215-916-00	METAL OXIDE	680	5%	3W (SP, EA, E3, E15, AUS)
R219	1-215-891-11	METAL OXIDE	680	5%	2W (AEP, UK, RU)
R219	1-215-916-00	METAL OXIDE	680	5%	3W (SP, EA, E3, E15, AUS)
R220	1-216-837-11	METAL CHIP	22K	5%	1/10W
R221	1-216-837-11	METAL CHIP	22K	5%	1/10W
R222	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R223	1-216-864-11	SHORT CHIP	0		
R225	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (SP, EA, E3, E15, AUS)
R226	1-216-841-11	METAL CHIP	47K	5%	1/10W (SP, EA, E3, E15, AUS)
R227	1-216-821-11	METAL CHIP	1K	5%	1/10W (SP, EA, E3, E15, AUS)
R228	1-216-821-11	METAL CHIP	1K	5%	1/10W (SP, EA, E3, E15, AUS)
R229	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (SP, EA, E3, E15, AUS)
R230	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (SP, EA, E3, E15, AUS)
R231	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R232	1-216-833-11	METAL CHIP	10K	5%	1/10W
R235	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (SP, EA, E3, E15, AUS)
R241	1-216-797-11	METAL CHIP	10	5%	1/10W
R242	1-216-838-11	METAL CHIP	27K	5%	1/10W
R243	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R244	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R245	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R246	1-216-809-11	METAL CHIP	100	5%	1/10W
R247	1-216-833-11	METAL CHIP	10K	5%	1/10W
R248	1-216-833-11	METAL CHIP	10K	5%	1/10W
R249	1-216-841-11	METAL CHIP	47K	5%	1/10W
R250	1-216-833-11	METAL CHIP	10K	5%	1/10W
R251	1-216-833-11	METAL CHIP	10K	5%	1/10W
R252	1-216-864-11	SHORT CHIP	0		
R253	1-216-809-11	METAL CHIP	100	5%	1/10W
R262	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R263	1-216-857-11	METAL CHIP	1M	5%	1/10W
R264	1-216-821-11	METAL CHIP	1K	5%	1/10W
R265	1-216-833-11	METAL CHIP	10K	5%	1/10W
R266	1-216-845-11	METAL CHIP	100K	5%	1/10W
R272	1-216-853-11	METAL CHIP	470K	5%	1/10W
R273	1-216-864-11	SHORT CHIP	0		
R274	1-216-864-11	SHORT CHIP	0		
R275	1-216-864-11	SHORT CHIP	0		
R281	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R282	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R283	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R284	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R306	1-216-833-11	METAL CHIP	10K	5%	1/10W
R307	1-216-833-11	METAL CHIP	10K	5%	1/10W
R308	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R310	1-216-833-11	METAL CHIP	10K	5%	1/10W
R311	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R312	1-216-837-11	METAL CHIP	22K	5%	1/10W
R313	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R321	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R322	1-216-837-11	METAL CHIP	22K	5%	1/10W
R323	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R324	1-216-833-11	METAL CHIP	10K	5%	1/10W
R325	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R341	1-216-833-11	METAL CHIP	10K	5%	1/10W
R342	1-216-821-11	METAL CHIP	1K	5%	1/10W
R343	1-216-837-11	METAL CHIP	22K	5%	1/10W
R344	1-216-837-11	METAL CHIP	22K	5%	1/10W
R345	1-216-833-11	METAL CHIP	10K	5%	1/10W
R346	1-216-821-11	METAL CHIP	1K	5%	1/10W
R347	1-216-837-11	METAL CHIP	22K	5%	1/10W
R348	1-216-837-11	METAL CHIP	22K	5%	1/10W
R351	1-216-835-11	METAL CHIP	15K	5%	1/10W
R352	1-216-845-11	METAL CHIP	100K	5%	1/10W
R353	1-216-841-11	METAL CHIP	47K	5%	1/10W
R354	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R356	1-216-817-11	METAL CHIP	470	5%	1/10W
R357	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R358	1-216-809-11	METAL CHIP	100	5%	1/10W
R361	1-216-833-11	METAL CHIP	10K	5%	1/10W
R362	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R363	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R364	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R371	1-216-809-11	METAL CHIP	100	5%	1/10W
R372	1-216-809-11	METAL CHIP	100	5%	1/10W
R373	1-216-809-11	METAL CHIP	100	5%	1/10W
R374	1-216-833-11	METAL CHIP	10K	5%	1/10W
R375	1-216-833-11	METAL CHIP	10K	5%	1/10W
R376	1-216-833-11	METAL CHIP	10K	5%	1/10W
R377	1-216-833-11	METAL CHIP	10K	5%	1/10W
R378	1-216-833-11	METAL CHIP	10K	5%	1/10W
R379	1-216-833-11	METAL CHIP	10K	5%	1/10W
R380	1-216-833-11	METAL CHIP	10K	5%	1/10W
R381	1-216-833-11	METAL CHIP	10K	5%	1/10W

MAIN **MOTOR (LD)** **MOTOR (TB)** **PANEL**

Ref. No.	Part No.	Description			Remarks
R382	1-216-833-11	METAL CHIP	10K	5%	1/10W
R383	1-216-833-11	METAL CHIP	10K	5%	1/10W
R384	1-216-833-11	METAL CHIP	10K	5%	1/10W
R385	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R386	1-216-837-11	METAL CHIP	22K	5%	1/10W
R387	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R388	1-216-837-11	METAL CHIP	22K	5%	1/10W
R389	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R390	1-216-837-11	METAL CHIP	22K	5%	1/10W
R391	1-216-833-11	METAL CHIP	10K	5%	1/10W
R392	1-216-821-11	METAL CHIP	1K	5%	1/10W
R393	1-216-833-11	METAL CHIP	10K	5%	1/10W
R394	1-216-821-11	METAL CHIP	1K	5%	1/10W
R395	1-216-837-11	METAL CHIP	22K	5%	1/10W
**********					
	1-687-133-12	MOTOR (LD) BOARD			
		**********			
**********					
	1-687-134-12	MOTOR (TB) BOARD			
		**********			
		< CONNECTOR >			
CN742	1-784-727-11	CONNECTOR, FFC 5P			
**********					
	A-4750-783-A	PANEL BOARD, COMPLETE (AEP, UK)			
	A-4750-794-A	PANEL BOARD, COMPLETE (SP, E3, E15, AUS)			
	A-4752-201-A	PANEL BOARD, COMPLETE (RU)			
	A-4752-206-A	PANEL BOARD, COMPLETE (EA)			
		**********			
		< CAPACITOR >			
C605	1-126-163-11	ELECT	4.7uF	20%	50V
C606	1-115-156-11	CERAMIC CHIP	1uF		10V
C607	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C608	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C609	1-115-156-11	CERAMIC CHIP	1uF		10V
C610	1-126-916-11	ELECT	1000uF	20%	6.3V
C611	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C612	1-126-157-11	ELECT	10uF	20%	16V
C613	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C614	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C615	1-124-257-00	ELECT	2.2uF	20%	50V
C617	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C618	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C619	1-124-589-11	ELECT	47uF	20%	16V
C620	1-119-772-91	ELECT	47uF	20%	35V
C621	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C622	1-126-163-11	ELECT	4.7uF	20%	50V
C623	1-126-163-11	ELECT	4.7uF	20%	50V
C624	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C625	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C626	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C628	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C629	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C630	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C631	1-162-927-11	CERAMIC CHIP	100PF	5%	50V

Ref. No.	Part No.	Description			Remarks
C632	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C633	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C634	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C635	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C636	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C637	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C638	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C639	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C640	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C641	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C642	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C643	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C646	1-124-234-00	ELECT	22uF	20%	16V
C647	1-124-589-11	ELECT	47uF	20%	16V
C648	1-124-234-00	ELECT	22uF	20%	16V
C649	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C653	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C654	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C655	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C656	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN601	1-784-751-11	CONNECTOR, FFC 29P			(RU,SP, EA, E3, E15, AUS)
CN601	1-784-753-11	CONNECTOR, FFC 31P (AEP, UK)			
CN602	1-784-774-11	CONNECTOR, FFC 13P			
CN603	1-784-778-11	CONNECTOR, FFC 17P			
* CN604	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
CN608	1-818-282-11	PIN, CONNECTOR 3P			
		< DIODE >			
D603	8-719-988-61	DIODE	1SS355TE-17		
D604	8-719-988-61	DIODE	1SS355TE-17		
D605	8-719-988-61	DIODE	1SS355TE-17		
* D606	6-500-486-01	DIODE	PTZ-TE25-11B (SP, EA, E3, E15, AUS)		
D607	8-719-988-61	DIODE	1SS355TE-17		
D608	8-719-988-61	DIODE	1SS355TE-17		
D609	8-719-988-61	DIODE	1SS355TE-17		
D610	8-719-056-78	DIODE	UDZ-TE-17-4.3B		
D611	8-719-988-61	DIODE	1SS355TE-17		
D613	8-719-988-61	DIODE	1SS355TE-17		
D614	8-719-988-61	DIODE	1SS355TE-17		
D615	8-719-988-61	DIODE	1SS355TE-17		
D616	8-719-988-61	DIODE	1SS355TE-17		
D620	8-719-988-61	DIODE	1SS355TE-17 (AEP, UK)		
D621	8-719-988-61	DIODE	1SS355TE-17 (AEP, UK, RU)		
D622	8-719-988-61	DIODE	1SS355TE-17 (AEP, UK, EA, RU)		
D623	8-719-988-61	DIODE	1SS355TE-17 (AEP, UK, RU)		
D624	8-719-988-61	DIODE	1SS355TE-17		
D625	8-719-988-61	DIODE	1SS355TE-17		
D630	8-719-988-61	DIODE	1SS355TE-17		
D631	8-719-978-33	DIODE	DTZ-TT11-6.8B		
D632	8-719-083-57	DIODE	UDZSTE-173.6B		
D633	8-719-988-61	DIODE	1SS355TE-17		
		< FILTER >			
FL601	1-518-976-11	INDICATOR TUBE, FLUORESCENT			

PANEL

Ref. No.	Part No.	Description			Remarks
		< IC >			
IC601	6-804-130-01	IC LC876996A-52S4-E			
IC603	6-704-045-01	IC MM1574ANLE			
IC604	8-759-533-04	IC M62703ML-E1			
		< SHORT >			
JR601	1-216-864-11	SHORT CHIP	0		
JR602	1-216-864-11	SHORT CHIP	0		
JR603	1-216-864-11	SHORT CHIP	0		
JR611	1-216-864-11	SHORT CHIP	0 (RU,SP, EA, E3, E15, AUS)		
JR612	1-216-864-11	SHORT CHIP	0 (RU,SP, EA, E3, E15, AUS)		
JR617	1-216-864-11	SHORT CHIP	0		
JR621	1-216-864-11	SHORT CHIP	0		
JR622	1-216-864-11	SHORT CHIP	0		
JR623	1-216-864-11	SHORT CHIP	0		
		< LED >			
LED601	6-500-809-01	DIODE SELU5223C-STP15 (I/⏻)			
		< TRANSISTOR >			
Q601	8-729-116-57	TRANSISTOR	2SB1068-K		
Q602	8-729-140-04	TRANSISTOR	2SB1116A-L		
Q603	8-729-140-04	TRANSISTOR	2SB1116A-L		
Q604	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q605	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q606	8-729-027-55	TRANSISTOR	DTC143EKA-T146		
Q607	8-729-027-55	TRANSISTOR	DTC143EKA-T146		
Q608	8-729-027-55	TRANSISTOR	DTC143EKA-T146		
Q610	8-729-027-55	TRANSISTOR	DTC143EKA-T146		
Q616	8-729-027-55	TRANSISTOR	DTC143EKA-T146		
		< RESISTOR >			
R601	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R602	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R603	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R604	1-216-841-11	METAL CHIP	47K	5%	1/10W
R605	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R606	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R607	1-216-841-11	METAL CHIP	47K	5%	1/10W
R608	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R609	1-216-837-11	METAL CHIP	22K	5%	1/10W
R610	1-216-833-11	METAL CHIP	10K	5%	1/10W
R611	1-216-837-11	METAL CHIP	22K	5%	1/10W
R612	1-216-833-11	METAL CHIP	10K	5%	1/10W
R613	1-216-837-11	METAL CHIP	22K	5%	1/10W
R614	1-216-837-11	METAL CHIP	22K	5%	1/10W
R615	1-216-837-11	METAL CHIP	22K	5%	1/10W
R616	1-216-833-11	METAL CHIP	10K	5%	1/10W
R617	1-216-837-11	METAL CHIP	22K	5%	1/10W
R618	1-216-833-11	METAL CHIP	10K	5%	1/10W
R619	1-216-837-11	METAL CHIP	22K	5%	1/10W
R620	1-216-837-11	METAL CHIP	22K	5%	1/10W
R621	1-216-833-11	METAL CHIP	10K	5%	1/10W
R622	1-216-049-11	RES-CHIP	1K	5%	1/10W
R623	1-216-833-11	METAL CHIP	10K	5%	1/10W
R624	1-216-049-11	RES-CHIP	1K	5%	1/10W
R625	1-216-833-11	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R626	1-216-049-11	RES-CHIP	1K	5%	1/10W
R627	1-216-833-11	METAL CHIP	10K	5%	1/10W
R628	1-216-833-11	METAL CHIP	10K	5%	1/10W
R629	1-216-150-91	RES-CHIP	10	5%	1/8W
R630	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP, UK)
R631	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP, UK)
R635	1-216-809-11	METAL CHIP	100	5%	1/10W
R636	1-216-833-11	METAL CHIP	10K	5%	1/10W
R637	1-216-833-11	METAL CHIP	10K	5%	1/10W
R639	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R640	1-216-834-11	METAL CHIP	12K	5%	1/10W
R641	1-216-849-11	METAL CHIP	220K	5%	1/10W
R642	1-216-817-11	METAL CHIP	470	5%	1/10W
R643	1-216-819-11	METAL CHIP	680	5%	1/10W
R644	1-216-821-11	METAL CHIP	1K	5%	1/10W
R645	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R646	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R647	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R648	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R649	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R650	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R651	1-216-833-11	METAL CHIP	10K	5%	1/10W
R652	1-216-835-11	METAL CHIP	15K	5%	1/10W
R653	1-216-817-11	METAL CHIP	470	5%	1/10W
R654	1-216-819-11	METAL CHIP	680	5%	1/10W
R655	1-216-821-11	METAL CHIP	1K	5%	1/10W
R656	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R657	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R658	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R659	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R660	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R661	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R662	1-216-833-11	METAL CHIP	10K	5%	1/10W
R663	1-216-837-11	METAL CHIP	22K	5%	1/10W
R664	1-216-817-11	METAL CHIP	470	5%	1/10W
R665	1-216-819-11	METAL CHIP	680	5%	1/10W
R666	1-216-821-11	METAL CHIP	1K	5%	1/10W
R667	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R668	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R669	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R670	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R671	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R674	1-216-835-11	METAL CHIP	15K	5%	1/10W
R675	1-216-835-11	METAL CHIP	15K	5%	1/10W
R676	1-216-835-11	METAL CHIP	15K	5%	1/10W
R677	1-216-864-11	SHORT CHIP	0		
R678	1-216-845-11	METAL CHIP	100K	5%	1/10W
R679	1-216-172-00	RES-CHIP	82	5%	1/8W
R680	1-216-838-11	METAL CHIP	27K	5%	1/10W
R681	1-216-849-11	METAL CHIP	220K	5%	1/10W
R682	1-216-833-11	METAL CHIP	10K	5%	1/10W
R683	1-216-849-11	METAL CHIP	220K	5%	1/10W
R684	1-216-821-11	METAL CHIP	1K	5%	1/10W
R685	1-216-841-11	METAL CHIP	47K	5%	1/10W
R686	1-216-841-11	METAL CHIP	47K	5%	1/10W

PANEL

Ref. No.	Part No.	Description			Remarks
R687	1-216-833-11	METAL CHIP	10K	5%	1/10W
R688	1-216-817-11	METAL CHIP	470	5%	1/10W
R689	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R690	1-216-809-11	METAL CHIP	100	5%	1/10W
R691	1-216-809-11	METAL CHIP	100	5%	1/10W
R692	1-216-809-11	METAL CHIP	100	5%	1/10W
R693	1-216-809-11	METAL CHIP	100	5%	1/10W
R694	1-216-809-11	METAL CHIP	100	5%	1/10W
R695	1-216-809-11	METAL CHIP	100	5%	1/10W
R696	1-216-809-11	METAL CHIP	100	5%	1/10W
R697	1-216-809-11	METAL CHIP	100	5%	1/10W
R698	1-216-182-00	RES-CHIP	220	5%	1/8W
R710	1-216-833-11	METAL CHIP	10K	5%	1/10W
R711	1-216-833-11	METAL CHIP	10K	5%	1/10W
R712	1-216-797-11	METAL CHIP	10	5%	1/10W
R713	1-216-797-11	METAL CHIP	10	5%	1/10W
R714	1-216-809-11	METAL CHIP	100	5%	1/10W
R715	1-216-805-11	METAL CHIP	47	5%	1/10W
R716	1-216-837-11	METAL CHIP	22K	5%	1/10W
R717	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R718	1-216-837-11	METAL CHIP	22K	5%	1/10W
R719	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R720	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R721	1-216-833-11	METAL CHIP	10K	5%	1/10W
R722	1-216-835-11	METAL CHIP	15K	5%	1/10W
R723	1-216-809-11	METAL CHIP	100	5%	1/10W
R725	1-216-809-11	METAL CHIP	100	5%	1/10W
R727	1-220-397-11	METAL CHIP	4.7M	5%	1/10W
R728	1-220-397-11	METAL CHIP	4.7M	5%	1/10W
R729	1-216-809-11	METAL CHIP	100	5%	1/10W
R730	1-216-809-11	METAL CHIP	100	5%	1/10W
R732	1-216-853-11	METAL CHIP	470K	5%	1/10W
R733	1-216-809-11	METAL CHIP	100	5%	1/10W
R734	1-216-821-11	METAL CHIP	1K	5%	1/10W
R735	1-216-821-11	METAL CHIP	1K	5%	1/10W
R736	1-216-821-11	METAL CHIP	1K	5%	1/10W
R737	1-216-845-11	METAL CHIP	100K	5%	1/10W
R738	1-216-845-11	METAL CHIP	100K	5%	1/10W
R739	1-216-845-11	METAL CHIP	100K	5%	1/10W
R740	1-216-845-11	METAL CHIP	100K	5%	1/10W
R741	1-216-845-11	METAL CHIP	100K	5%	1/10W
R742	1-216-845-11	METAL CHIP	100K	5%	1/10W
R743	1-216-845-11	METAL CHIP	100K	5%	1/10W
R744	1-216-845-11	METAL CHIP	100K	5%	1/10W
R745	1-216-845-11	METAL CHIP	100K	5%	1/10W
R746	1-216-845-11	METAL CHIP	100K	5%	1/10W
R747	1-216-845-11	METAL CHIP	100K	5%	1/10W
R748	1-216-845-11	METAL CHIP	100K	5%	1/10W
R749	1-216-845-11	METAL CHIP	100K	5%	1/10W
R750	1-216-845-11	METAL CHIP	100K	5%	1/10W
R751	1-216-845-11	METAL CHIP	100K	5%	1/10W
R752	1-216-845-11	METAL CHIP	100K	5%	1/10W
R753	1-216-845-11	METAL CHIP	100K	5%	1/10W
R754	1-216-845-11	METAL CHIP	100K	5%	1/10W
R755	1-216-845-11	METAL CHIP	100K	5%	1/10W
R756	1-216-845-11	METAL CHIP	100K	5%	1/10W
R757	1-216-845-11	METAL CHIP	100K	5%	1/10W
R758	1-216-845-11	METAL CHIP	100K	5%	1/10W
R759	1-216-845-11	METAL CHIP	100K	5%	1/10W
R760	1-216-845-11	METAL CHIP	100K	5%	1/10W
R761	1-216-845-11	METAL CHIP	100K	5%	1/10W
R762	1-216-845-11	METAL CHIP	100K	5%	1/10W
R763	1-216-845-11	METAL CHIP	100K	5%	1/10W
R764	1-216-845-11	METAL CHIP	100K	5%	1/10W
R765	1-216-845-11	METAL CHIP	100K	5%	1/10W
R766	1-216-845-11	METAL CHIP	100K	5%	1/10W
R767	1-216-845-11	METAL CHIP	100K	5%	1/10W
R768	1-216-845-11	METAL CHIP	100K	5%	1/10W
R769	1-216-845-11	METAL CHIP	100K	5%	1/10W
R770	1-216-845-11	METAL CHIP	100K	5%	1/10W
R771	1-216-841-11	METAL CHIP	47K	5%	1/10W
R772	1-216-821-11	METAL CHIP	1K	5%	1/10W
R773	1-216-809-11	METAL CHIP	100	5%	1/10W
R774	1-216-809-11	METAL CHIP	100	5%	1/10W
R775	1-216-809-11	METAL CHIP	100	5%	1/10W
R776	1-216-817-11	METAL CHIP	470	5%	1/10W
R777	1-216-809-11	METAL CHIP	100	5%	1/10W
R778	1-216-809-11	METAL CHIP	100	5%	1/10W
R779	1-216-809-11	METAL CHIP	100	5%	1/10W
R780	1-216-817-11	METAL CHIP	470	5%	1/10W
R781	1-216-809-11	METAL CHIP	100	5%	1/10W
R782	1-216-809-11	METAL CHIP	100	5%	1/10W
R783	1-216-809-11	METAL CHIP	100	5%	1/10W
R784	1-216-809-11	METAL CHIP	100	5%	1/10W
R785	1-216-809-11	METAL CHIP	100	5%	1/10W
R786	1-216-833-11	METAL CHIP	10K	5%	1/10W
R787	1-216-809-11	METAL CHIP	100	5%	1/10W
R788	1-216-809-11	METAL CHIP	100	5%	1/10W
R789	1-216-841-11	METAL CHIP	47K	5%	1/10W
R790	1-216-821-11	METAL CHIP	1K	5%	1/10W
R791	1-216-809-11	METAL CHIP	100	5%	1/10W
R792	1-216-809-11	METAL CHIP	100	5%	1/10W
R793	1-216-809-11	METAL CHIP	100	5%	1/10W
R794	1-216-809-11	METAL CHIP	100	5%	1/10W
R795	1-216-809-11	METAL CHIP	100	5%	1/10W
R796	1-216-809-11	METAL CHIP	100	5%	1/10W
R797	1-216-821-11	METAL CHIP	1K	5%	1/10W
R798	1-216-821-11	METAL CHIP	1K	5%	1/10W
R799	1-216-821-11	METAL CHIP	1K	5%	1/10W
R854	1-216-813-11	METAL CHIP	220	5%	1/10W
R861	1-216-833-11	METAL CHIP	10K	5%	1/10W
R862	1-216-809-11	METAL CHIP	100	5%	1/10W
R863	1-216-170-00	RES-CHIP	68	5%	1/8W

< SWITCH >

S601	1-762-875-21	SWITCH, KEYBOARD (I/⏻)
S602	1-762-875-21	SWITCH, KEYBOARD (DISLAY)
S603	1-762-875-21	SWITCH, KEYBOARD (EQ BAND)
S604	1-762-875-21	SWITCH, KEYBOARD (DISC 1)
S605	1-762-875-21	SWITCH, KEYBOARD (DISC 2)
S606	1-762-875-21	SWITCH, KEYBOARD (DISC 3)
S607	1-762-875-21	SWITCH, KEYBOARD (DISC SKIP/EX-CHANGE)
S608	1-762-875-21	SWITCH, KEYBOARD (⏏)
S610	1-762-875-21	SWITCH, KEYBOARD (P FILE)
S611	1-762-875-21	EQSWITCH, KEYBOARD (PRESET EQ)

PANEL | REM | SENSOR | SUB-TRANS | SW | TRANS

Ref. No.	Part No.	Description	Remarks
S612	1-762-875-21	SWITCH, KEYBOARD (ENTER)	
S621	1-762-875-21	SWITCH, KEYBOARD (CD)	
S622	1-762-875-21	SWITCH, KEYBOARD (TUNER/BAND)	
S623	1-762-875-21	SWITCH, KEYBOARD (TAPE A/B)	
S624	1-762-875-21	SWITCH, KEYBOARD (GAME)	
S627	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE/TUNING MODE)	
S628	1-762-875-21	SWITCH, KEYBOARD (GAME MIXING)	
S629	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)	
S630	1-762-875-21	SWITCH, KEYBOARD (REC PAUSE/START)	
S641	1-762-875-21	SWITCH, KEYBOARD (GROOVE)	
S642	1-762-875-21	SWITCH, KEYBOARD (SURROUND)	
S643	1-762-875-21	SWITCH, KEYBOARD (EFFECT ON/OFF)	
S644	1-762-875-21	SWITCH, KEYBOARD (TUNING +)	
S645	1-762-875-21	SWITCH, KEYBOARD (▷)	
S646	1-762-875-21	SWITCH, KEYBOARD (▶▶ ALUBUM +)	
S647	1-762-875-21	SWITCH, KEYBOARD (◀◀ ALUBUM -)	
S648	1-762-875-21	SWITCH, KEYBOARD (▮▮)	
S649	1-762-875-21	SWITCH, KEYBOARD (■)	
S650	1-762-875-21	SWITCH, KEYBOARD (TUNING -)	
		< VIBRATOR >	
X601	1-760-252-12	VIBRATOR, CRYSTAL (32.768kHz)	
X602	1-795-004-21	VIBRATOR, CERAMIC (10MHz)	
**********			
		REM BOARD	
		**********	
		< CONNECTOR >	
CN610	1-816-423-11	SOCKET, CONNECTOR 3P	
		< IC >	
IC610	6-600-174-01	IC RPM7240-H4 (R)	
		< SHORT >	
JR624	1-216-296-11	SHORT CHIP 0	
**********			
	1-687-132-12	SENSOR BOARD	
		**********	
		< CONNECTOR >	
CN731	1-785-329-21	PIN, CONNECTOR (LIGHT ANGLE) 3P	
		< IC >	
IC731	6-600-022-01	IC RPI-576	
**********			
		SUB-TRANS BOARD, COMPLETE	
		**********	
		< CONNECTOR >	
CN901	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P	
		< DIODE >	
D901	8-719-991-33	DIODE 1SS133T-77	
D902	6-500-522-21	DIODE 10EDB40-TB3	
D903	6-500-522-21	DIODE 10EDB40-TB3	
D904	6-500-522-21	DIODE 10EDB40-TB3	
D905	6-500-522-21	DIODE 10EDB40-TB3	
		< TRANSFORMER >	
PT902	X-4956-293-1	SUB TRANS ASSY (AEP, UK, RU)	
PT902	X-4956-294-1	TRANS ASSY, SUB (SP,E3,E15,AUS)	
PT902	X-4956-322-1	SUB TRANS ASSY (EA)	
		< RELAY >	
⚠RY901	1-755-276-21	RELAY, POWER	
		< SWITCH >	
⚠S901	1-786-055-21	SELECTOR,VOLTAGE (VOLTAGE SELECTOR) (EA,SP,E3,E15)	
**********			
	1-687-669-12	SW BOARD	
		*********	
		< SWITCH >	
S751	1-786-514-11	SWITCH, LEVER (SLIDE) (LEVER)	
**********			
	A-4752-210-A	TRANS BOARD, COMPLETE (EA)	
	A-4752-215-A	TRANS BOARD, COMPLETE (AUS)	
	A-4752-266-A	TRANS BOARD, COMPLETE (AEP, UK, RU)	
	A-4752-620-A	TRANS BOARD, COMPLETE (SP, E3, E15)	
		**********	
		< CAPACITOR >	

C906	1-164-159-21	CERAMIC	0.1uF		50V
C908	1-128-553-11	ELECT	220uF	20%	63V
C909	1-126-964-11	ELECT	10uF	20%	50V
C910	1-126-968-11	ELECT	100uF	20%	50V
C911	1-126-942-61	ELECT	1000uF	20%	25V
C920	1-131-679-31	FILM	0.01uF	5%	50V
C921	1-131-679-31	FILM	0.01uF	5%	50V
C922	1-131-679-31	FILM	0.01uF	5%	50V
C923	1-131-679-31	FILM	0.01uF	5%	50V
C924	1-136-165-00	FILM	0.1uF	5%	50V
C925	1-136-165-00	FILM	0.1uF	5%	50V
C926	1-164-159-21	CERAMIC	0.1uF		50V

		< CONNECTOR >	
CN904	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P	(AEP, UK, RU, AUS)
CN904	1-568-106-11	PIN, CONNECTOR (3.96mm PITCH) 4P	(SP, EA, E3, E15)
CN905	1-564-506-11	PLUG, CONNECTOR 3P	
* CN906	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CN907	1-764-333-11	PLUG, CONNECTOR 10P	
		< DIODE >	
D906	8-719-110-69	DIODE RD27ESB4	
D908	6-500-522-21	DIODE 10EDB40-TB3	
		< TRANSISTOR >	
Q902	8-729-048-52	TRANSISTOR 2SA1932 (TP)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

TRANS | TRANSLATION | VIDEO OUT

Ref. No.	Part No.	Description	Remarks
		< RESISTOR >	
R903	1-249-430-11	CARBON 12K 5% 1/4W	
R904	1-249-417-11	CARBON 1K 5% 1/4W	
⚠ R908	1-217-831-11	FUSIBLE 1 5% 1/4W	
**********			
		TRANSLATION BOARD (AEP, UK, RU)	
		**********	
		< CAPACITOR >	
C861	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	(AEP, UK, RU)
		< EARTH TERMINAL >	
* EP802	1-537-738-21	TERMINAL, EARTH (AEP, UK, RU)	
**********			
		VIDEO OUT BOARD	
		**********	
		< CONNECTOR >	
* CN805	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
		< JACK >	
J803	1-774-227-11	JACK, PIN 1P (VIDEO OUT)	
**********			
		MISCELLANEOUS	
		**********	
7	1-763-117-13	FAN, DC (SP, EA, E3, E15, AUS)	
8	1-769-940-11	WIRE (FLAT TYPE) (11 CORE)	(SP,EA,E3,E15,AUS)
8	1-777-353-11	WIRE (FLAT TYPE) (15 CORE) (AEP,UK,RU)	
9	1-693-615-11	TUNER (FM/AM) (SP, EA, E3, E15, AUS)	
9	1-693-616-11	TUNER (FM/AM) (AEP,UK)	
9	1-693-654-11	TUNER (FM/AM) (RU)	
10	1-400-285-11	F-BEAD, E2515MRT (EXCEPT E15)	
64	1-769-975-11	WIRE (FLAT TYPE) (13 CORE)	
65	1-769-883-11	WIRE (FLAT TYPE) (7 CORE)	
69	1-796-485-51	DECK, MECHANICAL (CWM43FF-05)	
73	1-773-317-11	WIRE (FLAT TYPE) (31 CORE) (AEP,UK,RU)	
73	1-775-251-11	WIRE (FLAT TYPE) (27 CORE)	(EXCEPT AEP,UK,RU)
⚠ 103	1-696-570-11	CORD, POWER (EA)	
⚠ 103	1-696-848-12	CORD, POWER (AUS)	
⚠ 103	1-777-071-83	CORD, POWER (AEP,UK,SP,RU)	
⚠ 103	1-792-381-11	CORD, POWER (E15)	
⚠ 103	1-827-226-11	CORD, POWER (E3)	
152	1-776-182-11	WIRE (FLAT TYPE) (5 CORE)	
226	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)	
227	1-773-048-11	WIRE (FLAT TYPE) (17 CORE)	
⚠ 229	8-820-244-01	OPTICAL PICK-UP (KSM-215DCP/C2NP)	
230	1-471-035-11	MAGNET ASSY	
233	1-469-854-11	CORE, FERRITE (EXCEPT E15)	
⚠ F904	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (T6.3AL/250V)	(AEP,UK,RU)
⚠ F904	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8.0AL/250V)	(SP,EA,E3,E15,AUS)
⚠ F905	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (T6.3AL/250V)	(AEP,UK,RU)
⚠ F905	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8.0AL/250V)	(SP,EA,E3,E15,AUS)
⚠ F906	1-533-470-12	FUSE, GLASS TUBE (DIA. 5) (T3.15AL/250V)	
⚠ F907	1-533-470-12	FUSE, GLASS TUBE (DIA. 5) (T3.15AL/250V)	
M741	A-4723-963-A	MOTOR ASSY, TABLE	
M751	A-4736-655-A	MOTOR ASSY, LOADING	
⚠ PT901	1-443-235-11	TRANSFORMER, POWER (AEP,UK,RU)	
⚠ PT901	1-443-237-11	TRANSFORMER, POWER (SP,E3,E15,AUS)	
⚠ PT901	1-443-282-11	TRANSFORMER, POWER (EA)	
⚠ PT902	X-4956-293-1	SUB TRANS ASSY (AEP,UK,RU)	
⚠ PT902	X-4956-294-1	SUB TRANS ASSY (AUS)	
⚠ PT902	X-4956-322-1	SUB TRANS ASSY (EA)	
⚠ PT902	X-4956-294-1	SUB TRANS ASSY (SP,E3,E15)	
RE701	1-477-680-12	ENCODER, ROTARY	

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MEMO

REVISION HISTORY

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Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2004.04	New